Micro-Mark®

THE SMALL TOOL SPECIALISTS

Holiday 2001

Free Shipping!

On orders over $100.00 from this catalog.

See page 2 for details.

1-800-225-1066

Call by Noon ET Dec. 21st for Christmas delivery

Shop on-line at www.micromark.com

Prices good through January 3, 2002

Index page 87

FREE SHIPPING DETAILS

Orders must be received no later than January 3, 2002, and your merchandise subtotal (not including gift certificates) must equal $100.01 or more. This offer does not apply to previous purchases and cannot be combined with any other offer. Free Shipping applies to UPS ground service or Priority Mail shipments to 48 contiguous States ***only***; regular shipping charges apply to other areas, for Quick Ship Service, and for orders with merchandise totalling $100.00 or less. *Free Shipping offer is not automatic.* To qualify, you must also provide the ***code number that appears in the yellow box*** in the address label of this catalog:

IF YOU ORDER BY PHONE: Please give the code number to our Customer Service Representative.

If YOU ORDER BY MAIL: Please be sure to use the order form bound into the center of this catalog. It has the code number pre-printed for you. You may enter 0.00 for the shipping charge if your merchandise subtotal is $100.01 or more.

IF YOU ORDER VIA THE INTERNET: Enter the code number in the space provided on the shipping address form (first page in checkout). **Note:** The computer will indicate the regular shipping charge, but our Customer Service Representatives will adjust the charge when they enter your order.

NEW!

Portable Band Saw Goes Right to the Job Site

When you can't bring your project into the workshop, take our Portable Band Saw out to the job site. It's lightweight (just 15 lbs), rugged (cast aluminum frame), and durable (ball-bearing gear and chain drive), with a guide bar and twin grip-contoured handles that give you maximum control over the cutting action. The 110 v AC two-speed motor develops up to 1 hp, and drives the blade at either 190 fpm or 256 fpm for wood or metal cutting. Includes universal 14 tpi bi-metal blade to cut right through rod, tubing, pipe, rail, bar stock or structural shapes made of metal, wood or plastic up to 4-1/2" square.

Bonus: Order the Portable Band Saw now, and we'll include a steel base that converts it to a bench top horizontal band saw, including spring-loaded pivot arm and quick-action vise (a $40 value!)

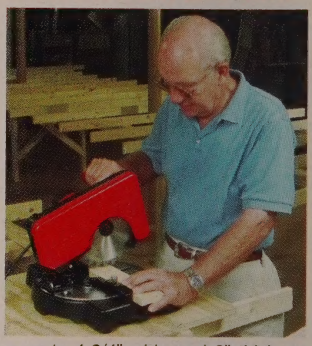
#82563 Portable Band Saw Outfit
Total Value $169.95 Our Price **$129.95**

Shipped to 48 contiguous U.S. only. For other areas, contact Customer Service for special arrangements.

#82572 Extra Blade (44-7/8" long x 1/2" wide x .024" thick x 14 tpi, bi-metal) **$14.95**

NEW!

Compound Miter Saw Makes Smooth Cuts in Framework and Trim



Our 8" compound miter saw is large enough for do-it-yourself construction, repair and remodeling projects, but its ability to smoothly cut compound angles – up to 45° both horizontally and vertically – makes it ideal for cutting millwork (trim), dollhouse components and model railroad benchwork. The 24-tooth carbide-tipped blade cross cuts lumber up to 4-3/4" wide and 2" thick, or adjusts in seconds to cut compound angles up to 1-5/8" x 7/8". For durability, the working components are made from cast aluminum and steel. For portability, the base, motor housing and shield are molded plastic. Motor: 110v AC, 4500 rpm, 1 hp, 9 amps. Overall size: 16" wide x 15" deep x 16" high. Weight: 15-1/2 lbs. Includes vacuum port for dust collection, safety interlocks and 6' power cord.

#82564 Compound Miter Saw **$69.95**

Shipped to 48 contiguous U.S. only. For other areas, contact Customer Service for special arrangements.

#82579 Extra Blade for Miter Saw (8" dia. x 5/8" hole, 24-tooth carbide tipped, 1/8" kerf) **$8.95**

NEW!

Ready-to-Use Washes Highlight Your Model's Details

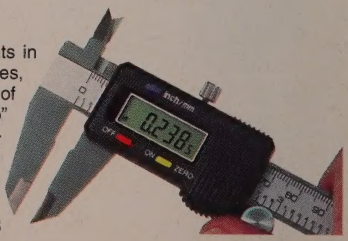
Expert modelers apply custom blended, thin washes of paint to accent their models' details. You'll get the same expert results by using "The Detailer," a set of pre-mixed water-based washes that you apply directly from the bottle to the surface of your model with a brush, sponge pad or cotton swab. Use The Detailer to accent body panels, stop and emergency lights, gold "chroming," window trim, emblems, wheel covers, grills and more. Also works on painted plastic, vinyl, metal and wood models, and as a stain on paper, wood and plaster. Includes 1 ounce each of six colors: black, red, yellow, green, brown and blue.

#82589 The Detailer **$18.95**
#60764 Sponge Applicator **$3.50**

NEW!

Easy-to-Read Digital Caliper

Our digital caliper quickly displays your measurements in large, easy-to-see LCD numerals. It measures insides, outsides, depths and steps up to 6" with a resolution of .0005" or .01mm. A "Zero" button lets you take "2-step" measurements without calculations; another button instantly converts inches to millimeters and back again. Made of hardened stainless steel for long life. Includes battery, instructions and foam-lined case.



#82556 Digital Caliper **$49.95**

Introducing the...

MicroLux High-Precision Heavy-Duty Miniature Milling Machine

The feature-packed design and robust construction of the MicroLux Milling Machine makes it well-suited for your most demanding model shop projects. Its smooth operation lets you put fine finishes not only on machinable metals, but on non-metals like wood and plastic as well. For operating convenience, we've equipped it with .050"-per-turn table feed screws and dials, and the headstock is lever-actuated to make drilling operations a breeze. The column can also be tipped for angled milling and drilling, and easily separates from the base for one-man relocation or storage. The MicroLux Milling Machine is the perfect companion for your MicroLux Lathe...it's also backed by Micro-Mark's guarantee of hassle-free product service.

JUST LOOK AT THESE FEATURES:

- Super rigid, heat-treated cast-iron base, column and headstock with precision-ground V-ways.
- Hardened and accurately finished main spindle supported by high precision centripetal roller bearings.
- .050" per turn table feed screws with zero-resettable dials.
- Powerful *adjustable-speed* motor with fan-cooled feedback-sensing power boost circuitry.
- Hi-low gearbox for torque amplification at low speed.
- Tilting column for angle milling/drilling
- Lever-actuated spring-return headstock performs drilling operations with ease.

MicroLux Milling Machine Specifications

Table size: 16" wide x 3-3/4" deep
Table travel (X direction): 8"
Cross slide travel (Y direction): 4"
Headstock travel (Z direction): 7"
Clearance (spindle to table-top): 11"
Center of spindle to face of column: 6"
Spindle speed: variable between 0 and 2500 rpm
Spindle taper: MT-3
Column angle: tilts from -45° to +45°
Motor: 350 watt (0.47 hp), 110vAC, 50/60 Hz
Overall size: 30" high x 20" deep x 20" wide
Weight: 110 pounds (basic machine without accessories).

Speed is infinitely variable from 0 to 2500 rpm.

.050" per turn feed screws have zero-resettable dials.

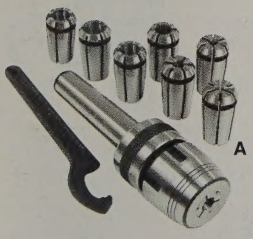
Column tilts up to 45° for angled milling and drilling.

Lever-actuated headstock makes drilling easy.

#82573 MicroLux Milling Machine includes variable-speed 1/2 hp motor with high/low speed transmission, 1/2" drill chuck and drawbar, table locks, column lock and drill stop, fan-cooled power supply with feedback-sensing power boost circuitry, headstock spring return, V-way chip guards, chuck/collet chip guard, indicator scales for the X and Z directions, fine-adjust knob for the Z direction, safety cut-off switch, wrench set and instruction manual/parts diagram. **$569.95**

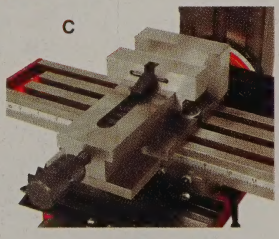
Shipped to 48 contiguous U.S. only. For other areas, contact Customer Service for special arrangements.

Accessories for the MicroLux Milling Machine

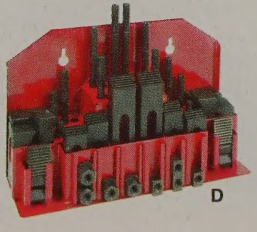


A. #82575 COLLET SET Universal design has MT-3 shank to fit MicroLux lathe and milling machine plus many others. Collet holder has "snap-in" style collet nut. Includes 8 collets in sizes 1/8, 3/16, 1/4, 5/16, 3/8, 1/2, 9/16 and 5/8 inch, plus drawbar for lathe (drawbar for milling machine comes with that machine). **$109.95**

B. #82576 8-PIECE END MILL SET includes high speed steel single-ended 2-flute end mills in the following sizes (a perfect match for our #82575 collet set): 1/8, 3/16, 1/4, 5/16, 3/8, 1/2, 9/16 and 5/8 inch. **$39.95**



C. #82577 QUICK-LOCK MILLING VISE bolts directly to top of milling table. Jaws are 4" wide x 7/8" deep and open 3-1/8". Overall height 2-5/8". Made of machined steel. **$59.95**

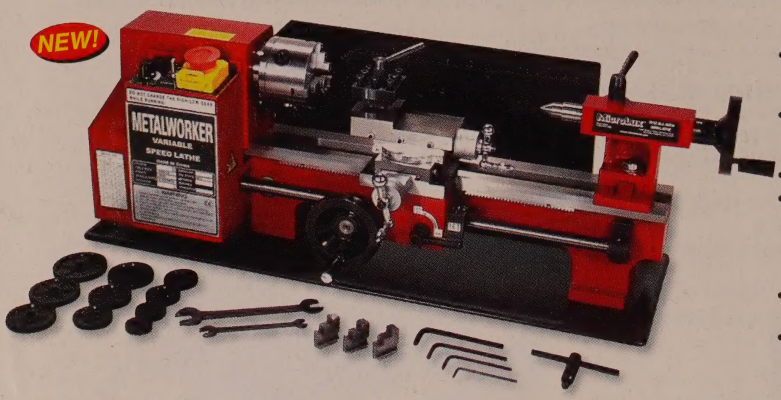


D. #82578 42-PIECE CLAMPING SET includes 12 studs (12mm size), 6 pairs of step blocks, 4 tee nuts (for 12mm wide slots), 4 flange nuts, 4 coupling nuts and 6 holddown bars, plus easy access storage rack. . . **$69.95**

More mill accessories can be found on page 5.

MicroLux 7x12 All-Inch Heavy-Duty Miniature Lathe

You'll be impressed with the high dimensional accuracy and careful workmanship that goes into the construction of every MicroLux Heavy-Duty Lathe. This is one of the largest lathes built for hobby and model shop use. Its sturdy construction and smooth operation let you put fine finishes on turnings up to 7" diameter and 12" long, but it's compact enough (just 78 pounds) to be portable. This lathe has true imperial (inch) feed screws and dials (.050" per revolution), *so metric conversions are not required.* The MicroLux High-Precision lathe is so versatile it will cut all metals, including carbon steel, stainless steel, cast iron, aluminum, brass, copper, bronze, and nickel-silver, plus non-metals such as wood and plastic. And, with the optional accessories (listed below) installed, it will perform virtually all the turning tasks you'll ever need.



JUST LOOK AT THESE FEATURES:

- Super rigid, heat-treated (stress-relieved and tempered) cast-iron bed with precision-ground V-ways.
- Hardened and accurately finished main spindle supported by high-precision centripetal ball bearings.
- Carriage power feed
- Powerful 250 watt (1/3 hp) *adjustable-speed* motor with reversing switch for bi-directional automatic feed and thread cutting.
- Four-position tool post makes tool changes fast and easy
- Zero-resettable dials with true inch divisions (.050" per revolution) eliminate tedious metric conversions.

MicroLux Lathe Specifications

Swing over bed: 7.087" diameter
Swing over carriage: 2.250" diameter
Distance between centers: 11.800"
Main spindle speeds: variable between 100 and 2500 rpm
Hole through main spindle: .787" diameter
Main spindle taper: MT-3
Carriage cross-feed travel: 2.560" (.050" per turn)
Compound slide travel: 2.160" (.050" per turn)
Tail spindle travel: 2.125"
Tail spindle taper: MT-2
Motor: 250 watt (1/3 hp) output, 110vAC, 50/60 Hz
Thread cutting: 12 to 52 TPI in 18 steps
Overall size: 12" high x 12" deep x 28" long
Weight: 78 pounds (basic machine without accessories).

#82500 MicroLux 7 x 12 Lathe Outfit includes variable-speed motor and high/low transmission, 3-jaw self-centering chuck (bolts to spindle) with inside/outside jaws and wrench, compound slide with four-position tool post, MT-2 dead center for tailstock, carriage power feed with change-gear set for threading, thread position indicator, splash guard, chip tray and instruction manual/parts diagram. **$569.95**

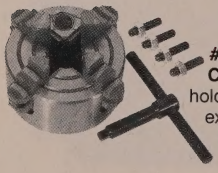
Shipped to 48 contiguous U.S. only. For other areas, contact Customer Service for special arrangements.

Accessories for the MicroLux Lathe

#82501 CARBIDE CUTTERS 11 piece set with 5/16" square shanks. **$34.95**

#82503 STEADY REST Clamps onto bed to support long stock. **$29.95**

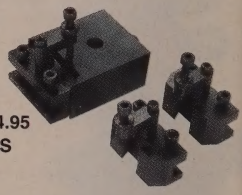
#82504 FOLLOWER REST Bolts to carriage behind cutting tool to prevent deflection of thin stock . . **$27.50**

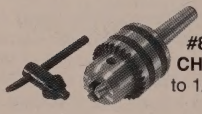


#82505 4-JAW INDEPENDENT CHUCK Allows turning off-center or holding irregular parts. 2-1/4" internal, 4" external capacity. Bolts to headstock spindle (4 bolts). . . **$79.95**

#82571 DIGITAL READ OUT Displays the lathe spindle speed to the nearest 20 rpm. Magnetic feet hold display to top of headstock. Installs in just 10 minutes. **$74.95**

#82506 QUICK CHANGE TOOL POST Includes 3 tool holders with adjustment screws, mounting base with dovetail lock and mounting hardware. Holds tools with up to 3/8" shank. **$54.95**
#82574 EXTRA TOOL HOLDERS (SET OF 3). . . . **$34.95**

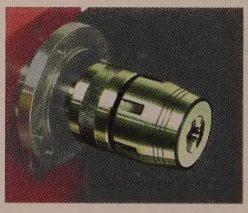


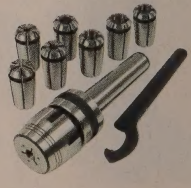


#82507 TAILSTOCK CHUCK MT-2 shank. Holds drills 1/32" to 1/2" diameter. Includes key. . . . **$31.95**

#82511 ADJUSTABLE CUTTER SET Holds cutting tools at convenient distance from stock. Includes three cutting tools, two adapters and wrench. **$54.95**

#82575 COLLET SET FOR LATHE AND MILLING MACHINE Universal design includes collet holder with MT-3 shank and "snap-in" style collet nut, plus 8 collets in sizes 1/8, 3/16, 1/4, 5/16, 3/8, 1/2, 9/16 and 5/8 inch. Includes drawbar for lathe (drawbar for milling machine comes with that machine). **$109.95**

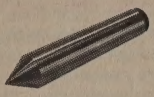




More lathe accessories can be found on the next page.

Additional Lathe Accessories

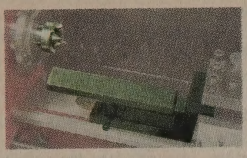
#82510 LATHE DOG Drives stock held between centers. . **$4.95**



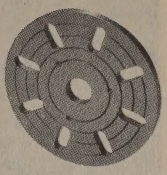
#82508 DEAD CENTER MT-3 size fits headstock spindle. . **$4.95**

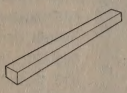
#82509 LIVE (BALL BEARING) CENTER MT-2 shank fits tailstock. . **$12.50**

#82570 TOOL REST and SPUR DRIVER Tool rest mounts to tool post for use with wood turning tools. Includes MT-3 spur driver for headstock **$33.95**



#82502 FACE PLATE Bolts to headstock spindle using bolts from 3-jaw chuck. 6-1/4" dia. . . . **$18.95**





#31111 1/4" SQUARE HIGH SPEED TOOL BLANK For making your own turning tools. 2.5" long.. . . . **$3.95**

CENTER DRILL SETS Designed to seek exact center without wandering on the rotating stock. Start with center drill, then continue with standard drill bits.

#31114 Three pc. set includes nos. 0, 1 and 2. . . . . **$18.00**
#82284 Four pc. set includes nos. 1, 2, 3 and 4. . . . **$24.00**

Convert Your Old Lathe to an Accurate All-Inch Machine...In Only 10 Minutes!

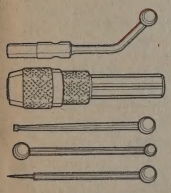
NEW!

A Micro-Mark **Exclusive!**

The #82500 MicroLux mini-lathe is the only lathe of its type with accurate all-inch cross feed and compound feed screws (.050" per turn of the crank handle). Other lathes that look similar to the MicroLux have relabeled metric feed screws that provide approximately .040" per turn of the crank handle. Our kit provides all the parts you need to easily convert your 7x10 or 7x12 mini lathe to true all-inch construction: two 20 tpi feed screws, two .050" per turn zero-resettable dials, two indicator blocks, one brass cross-feed nut, and one compound block, plus easy-to-follow instructions. Upgrade your machine today and eliminate confusing calculations and discrepancies caused by inaccurate feed screws and dials. The conversion takes only 10 minutes!

#82545 Metric-to-Inch Lathe Conversion Kit. **$69.95**

Additional Mill Accessories



#80818 "WIGGLER" CENTER FINDER SET Positions the workpiece in relation to the tool spindle, checks concentricity, establishes center distances, etc. Tool "wiggles" until perfect alignment is obtained. The work is then indexed by half the contact diameter to true position. Includes wiggler body with 3/8" shank, .250" dia. ball contact, .100" dia. disk contact, needle point contact and indicator holder. . . **$18.95**

3/8" HIGH SPEED STEEL END MILLS DOUBLE END - 2 FLUTE (Not shown)

	Mill Dia.	Length of Cut	Price
#80202	1/8"	3/8"	**$8.95**
#80203	5/32"	7/16"	**$8.95**
#80204	3/16"	7/16"	**$8.95**
#80205	1/4"	1/2"	**$8.95**
#80206	5/16"	9/16"	**$9.95**
#80207	3/8"	9/16"	**$9.95**

Mini Woodturners Lathe

NEW!

Shipped to 48 contiguous U.S. only.
For other areas, contact Customer Service for special arrangements.

Compact bench-top miniature lathe has the power needed for larger projects without sacrificing the control needed for delicate work. The bed, headstock, tailstock and tool rest are made of heavy cast iron to reduce vibration, and the 1/3 hp variable speed DC motor has a load compensation circuit that maintains high torque even at low speed. Includes ball bearing headstock, MT-1 4-prong spur driver, MT-1 ball bearing cup center, 5" wide tool rest, 3" diameter face plate, toothed drive belt, wrenches and instructions. Capacity: 6" diameter x 14-1/4" long. Speed: 0 to 4500 rpm. Plugs into standard 110v AC wall outlet. Overall size: 27" long x 8" deep x 11" high. Weight: 42 pounds.

#82565 Mini Wood Lathe **$149.95**

Micro Turning Tool Set for Precision Lathe Work

Our professional quality turning tool set is made of the finest quality tool steel, carefully ground and polished with nicely turned and lacquered hardwood handles. Excellent for jewelry work, dollhouse miniatures, wooden toys, military models, railroad models and furniture finials...in fact, anytime you need miniature size lathe turnings in soft metals, wood or plastic. Many shapes can also be used for carving or engraving.

#20125A Micro Lathe Tool Set
List $79.95 . . . . Our Price **$59.95**

Turning Chisel Set

Includes 1/8" gouge, parting tool, skew and straight cut. Wood handles. Approx. 6" long overall.

#60922A 4-Piece Turning Set . . . **$28.95**

NEW!

The MicroLux Grit Blaster

•Safely removes paint, rust and tarnish
•Prepares surfaces for painting
•Uses your shop vac for power...*no compressor required!*

Our MicroLux Grit Blaster safely restores the original luster of brass models, removes rust from tools, engraves decorative designs into glass, removes paint, deburrs castings, cleans lock assemblies, prepares objects for painting and so much more...the uses are endless. Your shop vac supplies the power needed to mix abrasive grit into a stream of fast-moving incoming air. Use the included nozzle to direct the grit at the surface you want to "blast" clean. The air stream is strong enough to efficiently remove tarnish and paint, but gentle enough to be used even on plastic models. With your choice of three different types of grit, you can obtain the surface finish you need: from a dull, microscopically grainy surface that optimizes paint adhesion, to a bright finish that can be clear-coated for long time luster. And since the cabinet is under vacuum, the abrasive grit doesn't fly all around your work shop. Includes clear plastic dome, turntable, clamp-type wand for positioning objects during blasting, grit recovery system, and adapter for connecting standard 1-1/4" vacuum hoses. Overall size: 15" diameter by 15" high. Dome area is 12" diameter by 7" high. Order abrasive grit below.

#82536 MicroLux Grit Blaster . . . . . List $249.95 . . . . . **$199.95**

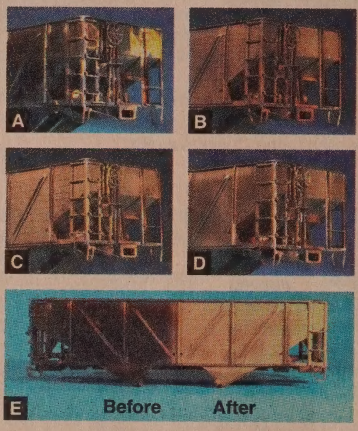
A. Original condition: Coated with blue layout die and heavy tarnish

B. After first blasting with Aluminum Oxide

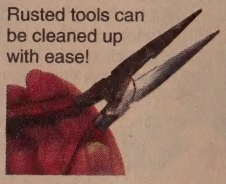
C. After intermediate blasting with Crushed Glass

D. After final blasting with Glass Beads

E. The difference is amazing!



Rusted tools can be cleaned up with ease!



Etch designs into glass.

Abrasive Grit
for use with the MicroLux Grit Blaster
(5 pound container) . . . . . **$19.95 ea.**

#82532 Aluminum Oxide for aggressive cleaning

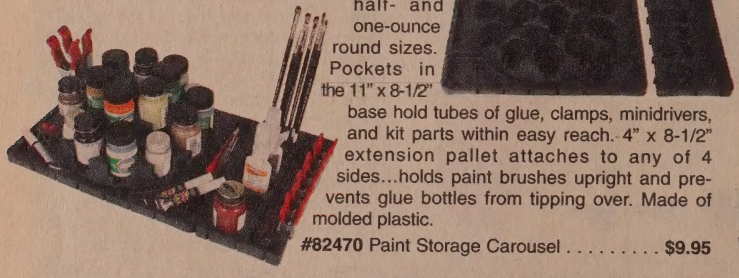
#82533 Crushed Glass for tarnish removal

#82534 Glass Beads for a smooth finish

NEW!

Paint Storage Carousel Keeps Your Workbench in Order

Rotating double-tier carousel stores 18 hobby-size paint bottles in quarter-ounce square or half- and one-ounce round sizes. Pockets in the 11" x 8-1/2" base hold tubes of glue, clamps, minidrivers, and kit parts within easy reach. 4" x 8-1/2" extension pallet attaches to any of 4 sides...holds paint brushes upright and prevents glue bottles from tipping over. Made of molded plastic.



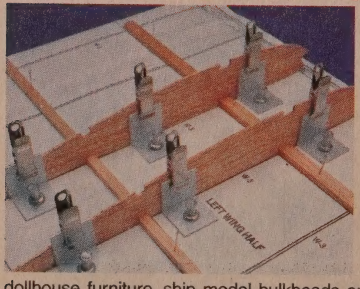
#82470 Paint Storage Carousel **$9.95**

FLITZ Polishes and Protects Any Metal

Made in Germany, where keeping things bright and clean is a way of life. Flitz is the universal polish that cleans, shines and protects aluminum, brass, stainless steel, copper, chrome, gold and silver. It's an excellent fiberglass cleaner as well. Removes rust, oxidation, tarnish, heat discoloration and water stains, and leaves a protective coating that resists tarnish for up to 6 months. It's the best you can buy.

#60436 Flitz (50 gram tube) . . **$10.45**

90° Angle Jig Builds Projects Square and True



If you assemble models or miniatures over a building board, you'll wonder how you got along without this unique new tool. How it works: just position the 90° aluminum angle next to the item you want to hold. Then press the push pin through the hole in the angle and into the building board. Place the item against the vertical face of the angle and hold in place with the mini clamp. Designed specifically for holding wing ribs during model airplane wing assembly. They're also ideal for dollhouse furniture, ship model bulkheads and anytime you need to hold a part at 90° over a building board. Set includes six 1"x 1"x1" aluminum angles, six aluminum push pins and six stainless steel smooth jaw spring clamps.

#80344 90° Angle Jigs (Set of 6) . . . **$14.95** 2 or more sets **$12.95 ea.**

Plastic Dip Compound Improves Grip, Insulates

Plasti Dip puts a cushioned plastic coating on all kinds of hand tools. It also improves grip on highly polished tool handles. And it insulates and weatherproofs as well. Produces a tough, thick, flexible finish. Won't chip or crack, even under extreme weather conditions. Easy to use...just dip, remove and let dry. One dip equals more than 10 coats of paint. 14 fl oz. Red color. (Shipped by UPS ground only).

#82214 Plasti Dip **$8.95**

NEW!

Sup-R Sanders Last Forever, Require Less Effort

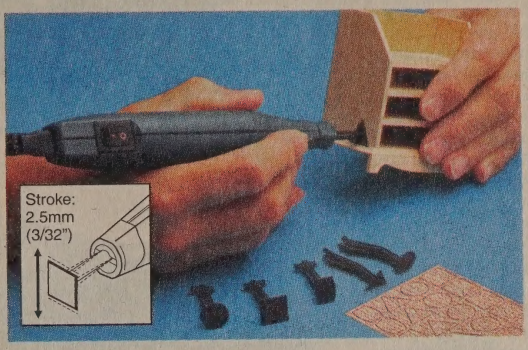
Use Sup-R Sanders on wood, styrofoam, tile, brick, glass, metal, plastic and plastic laminate. Sup-R Sanders will not tear out or wear out. The indestructible tungsten-carbide abrasive (the same material used for long-life saw blades and router bits), heat-welded to a steel substrate, stays sharp and removes material quickly. No-slip grips molded into the light-weight polymer handle reduce fatigue, and a hidden compartment holds a brass-bristle brush (included) for removing debris from the 2-5/8" x 5-1/8" cutting surface. Lifetime Guarantee. Color-coded for quick identification.

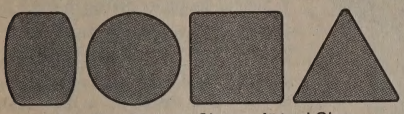
#82483 Blue Sup-R Sander Fine (150 Grit) **$12.95**
#82484 Yellow Sup-R Sander Medium (80 Grit) **$12.95**
#82485 Red Sup-R Sander Coarse (60 Grit) **$12.95**

Micro Power Sander Gives You Professional Finishes with Little Effort

Our new reciprocating sander does in minutes what used to take hours...if you could do it at all! And it works in places even your fingertip can't fit. 8 different interchangeable sanding shapes snap into the working end with just a twist. Works on wood, metal or plastic. If you build models or miniatures, it's the tool you've been waiting for! Set includes power sander, 8 tips, and 60 self stick sanding pads. 110v AC. 7-1/2" long overall. 7,000 strokes/minute. Made in Japan.

#81266 Micro Sander . . . . List $94.95 . . . . Our Price **$69.95**





Sanding Shapes Shown Actual Size

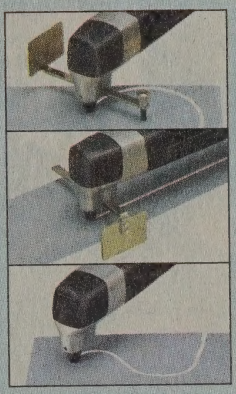
60 REPLACEMENT SANDING PADS (15 OF EACH SHAPE)

#81279	#81280	#81281
180 grit **$2.95**	240 grit **$2.95**	400 grit **$2.95**

Powered Nibbler Zips Through Sheet Metal, Wood and Plastic

It's easy to make fast, accurate cuts in sheet metal, plastic, even thin wood with our new powered nibbler. The cutting action is so smooth, metal edges will need almost no deburring. The comfortable grip and on-off trigger give you complete control over the cutting action. The rotating head makes perfect scroll cuts a breeze.

And perfect circles and straight lines are easy-to-cut with the special attachments we include. Cuts up to 1/16" thick brass, aluminum, plastic and wood; up to 1/32" sheet steel. 110 v AC; 2,900 strokes per minute; 8 1/2" long. Order today and let our powered nibbler make your sheet cutting quick, accurate and easy!



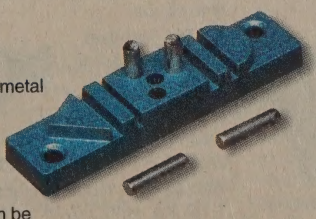
#81556 Powered Nibbler . . . . . List $179.95 . . . . . Our Price **$139.95**
#81556A Replacement Cutter/Nozzle **$29.95**

Jeweler's Bench Block Holds Work Steady

Filing, cutting, sanding and sawing of small parts is a lot easier with this unique tool. Cast iron block attaches to your workbench with wood screws (not included). Rubber insert keeps items from slipping and protects against marring. And since it extends beyond workbench edge, it becomes a miniature work surface that gives you a lot more control, visibility and holding power. Also has a handy anvil when you need a hard working surface.

#60523 Jeweler's Bench Block **$18.95**
#60550 Rubber Insert Replacement **$3.50**

Economical Strip and Wire Bending Jig



A nice little tool for making bends in wire and metal strip stock. Steel pins are moved to different locations in the cast aluminum block depending on the shape you need. Also has a triangular shape on one end for making bends less than 90° and a 1/2" radius shape on the other end for large smooth curves. Can be held in a vise or screwed to workbench with flat head wood screws (not included).

#60401 Wire/Strip Bending Jig **$8.50**

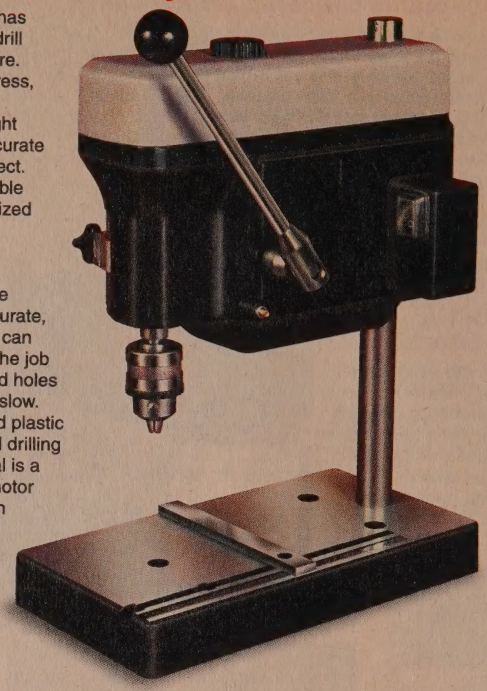
Miniaturize Your Full Size Vacuum to Clean Every Nook and Cranny

Kit includes everything you need for easy cleaning of dollhouses, model railroads, ship models, delicate figurines, computer printers and keyboards, sewing machines and other hard-to-reach locations. Miniature attachments include adapter, straight extension, curved extension, oval brush, round brush, crevice tool and 36" long x 1/2" diameter hose. Use with any standard size vacuum cleaner with 1-1/4" fittings.

#81064 Miniature Vacuum Kit . . . **$9.95**

A Jeweler's-Quality Drill Press at a Price You Can Afford

The MicroLux Drill Press has all the quality features of drill presses costing much more. When you own this drill press, you'll never have to worry again about having the right tool when precise and accurate drilling is vital to your project. Here, at last, is an affordable drill press designed and sized for small precision work. No more working with cumbersome, oversized drill presses...and no more mistakes from using inaccurate, hand held drills. Plus, you can select the right speed for the job in seconds. Prevent jagged holes in wood from a speed too slow. Protect against overheated plastic from a speed too fast. And drilling in steel, brass or any metal is a breeze. The high torque motor will drill a 1/4" hole through 1/4" brass quickly and easily...and even deeper holes in wood, plastic and other soft materials. Imported from Japan exclusively by Micro-Mark.



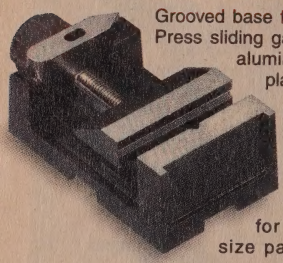
JUST THE RIGHT SIZE AND JUST THE RIGHT FEATURES FOR ALL SMALL DRILLING PROJECTS!

- Quick-change, belt-drive speed control lets you change speeds to accommodate various materials... 2100, 4500 and 6500 rpm
- Rugged cast aluminum housing
- No-flex 3/4" x 14" h solid steel column
- Precision 3-jaw Jacobs chuck and key... .028" to 1/4" capacity
- Ball bearing spindle with 1-1/4" travel assures accuracy and long life
- Calibrated depth control with positive stop
- 5-1/2" Throat Depth
- High-torque motor plugs into standard 110v AC outlet
- Quick release handles let you adjust chuck-to-table distance from 0" to 7" instantly
- Cast aluminum table with machined surface keeps your work square and true and takes up only 5" x 9"of your valuable workbench space
- Sliding gauge for drilling in-line holes

#81631 MicroLux Drill Press
List $179.95 . . . . . Our Price **$149.95**

#15117 Replacement Drive Belt for Drill Press **$6.95**

Drill Press Vise



Grooved base fits on Microlux Drill Press sliding gauge. Made of cast aluminum with easy grip plastic knob and steel screw. Jaws are 2" wide with grooves for holding round stock. Also has a handy anvil top with a cast-in hole for supporting micro size parts while drilling. Jaws open to 1-1/4".

#15118 Drill Press Vise **$19.95**

Foot Operated Speed Control for Microlux Drill Press

NEW!

Variable speed foot-operated rheostat for drill press lets you adjust motor speed to suit material and drill size. Includes accessory socket for light. Electrical rating: 110vAC, 1.2 amps max.

#82412
Foot Operated Speed Control
List $34.50 . . Our Price **$29.95**

No-Mar Gentle Jaws Protect Parts

When you need to hold soft or delicate items in a vise, these attachments prevent damage caused by the steel serrations. Firm rubber faces hold parts securely, yet gently. Magnets on the back side keep the jaws in place. 3" wide x 1-1/4" deep.

#80848 Gentle Jaws **$6.95**

X-Y Table Attachment Increases Accuracy by 30 Times!

NEW!

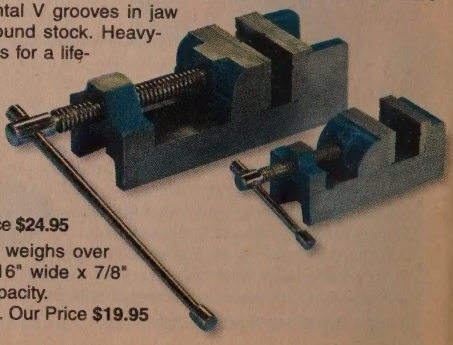
The MicroLux X-Y Table Attachment increases the accuracy of hole locations to within .0005 inch of true position – 30 times better than "eyeball" center-punching! Table positioning is controlled in the X and Y directions by smooth-acting zero-adjustable handwheels. Adjustable gibs in dovetail guides maintain accuracy and eliminate side play even after many years of use, and special retractable covers keep the lead screws free of chips. Although designed specifically for the #81631 MicroLux Drill Press, our table attachment can be easily mounted to other machines. Includes sliding front scale, hold-down clamps, mounting hardware and template, and hardware for mounting the #15118 Vise. Made of steel, aluminum and engineering polymers.

#82389 MicroLux X-Y Table Attachment
List $129.95
Our Price **$99.95**

Specifications (inches):
Table Size: 8-1/4 L x 2-3/4 D
Overall size: 10-1/2 L x 7-1/2 D x 1-11/16 H
X Direction Travel: 5-1/4
Y Direction Travel: 1-3/4
Dial graduations: .001; .050 per revolution

Toolmaker's Vises Hold Tight for Drill Press Work

Machinists and toolmakers always lock their work in a vise. Our vises are cast and ground tool steel. Both will stand flat on base or side and have vertical and horizontal V grooves in jaw faces for holding round stock. Heavy-duty, well made tools for a lifetime of use.



#21134 Standard model weighs over 5 lbs. with 2-1/2" wide x 1-1/2" deep jaws. 2-1/2" capacity.
List $32.95 . . Our Price **$24.95**

#60282 Mini model weighs over 1-1/2 lbs. with 1-7/16" wide x 7/8" deep jaws. 1-3/8" capacity.
List $24.95 . . . . . Our Price **$19.95**

Variable Speed Band Saw Cuts Intricate Shapes in Metal, Plastic, Wood, Stone, Tile, Glass and More!

Band saws designed for cutting wood run too fast to cut metal, and plastic comes away as a gooey mess. The electronic speed control on our professional quality band saw lets you dial-in the exact speed you need to cut these materials. Make designs you never dreamed possible...cutting metal is so smooth and fast you'll complete your work in just 1/10th the time of other methods. You can even stack workpieces to make exact duplicates in one pass. And, with the optional diamond blade and cooling system sold below, you can easily cut intricate designs in glass, tile and other hard materials. Overall size (band saw only): 15" wide x 20" high x 11" deep; weighs 13 lbs. Includes one .180" wide x .031" kerf x 14tpi blade, adjustable ball bearing blade guide and instructions. Made in Japan.

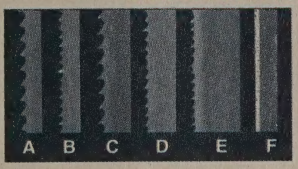
Features:

- Sturdy cast-aluminum frame
- Twin 6-3/8" dia. drive wheels mounted in ball-bearings
- 7-3/4" x 7-3/4" aluminum table tilts between 0° to 45° for bevel cuts
- 6" throat depth
- 3" throat height
- Cutting capacities: softwood 3", hardwood 2", steel 3/8", aluminum 3/4", brass/copper 5/8", plastic 1-1/4".
- 425 to 650 ft/min variable blade speed
- 110vAC, 100w motor
- Adjustable miter gauge
- Moisture-sealed electronics

#82203 Variable Speed Band Saw . . . . . List $349.95 . . . . . Our Price **$299.95**

Blades and Accessories

Note: All toothed blades will cut steel, brass, copper, plastic and wood. Blade selection is based on material hardness, cutting speed and finish. Use coarse-toothed 14tpi (teeth per inch) blades for fast, aggressive cutting of thick or soft materials. Use fine-toothed 24tpi blades for smooth cuts in thin or hard materials. .138" wide blades will cut curves down to 3/8" radius; .180" wide blades down to 3/4" radius; .250" wide blades down to 1" radius. Wide blades are best for straight cuts.



A. #82204 Blade .138" wide x .031" kerf x 14tpi. **$19.95**

B. #82205 Blade .138" wide x .025" kerf x 24tpi. **$19.95**

C. #82206 Blade .180" wide x .031" kerf x 14tpi. **$19.95**

D. #82207 Blade .180" wide x .025" kerf x 24tpi. **$19.95**

E. #82208 Blade .250" wide x .031" kerf x 24tpi. **$24.95**

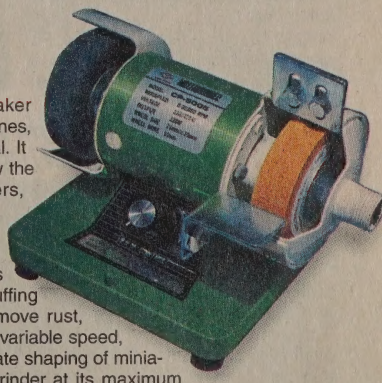
F. #82209 Diamond Blade for cutting stone, tile, glass, etc. Must be used with cooling set sold at right. .125" wide x .025" kerf **$99.95**

#82211 Cooling System for Band Saw Required when cutting stone, tile, ceramics, gems, minerals, glass and other hard materials. Reservoir and adjustable valve dispense water directly on the cut to lubricate and cool the blade, preventing overheating and premature blade failure. Unlike other water bath machines, ours won't splash water all over you and your workbench. Includes reservoir, valve, tubing, gasket, 12" x 16" collection tray and hardware. **$39.95**

"...you've become favorite store—I read your catalog every where. My dream is to call you up and say: "Send me one of everything!"

Neil. C.
email

Small Grinder Smooths, Shapes, Sharpens and Deburrs Metal



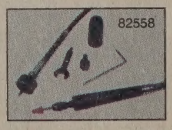
A unique power tool for the model maker and miniaturist. Like most grinding machines, ours will shape, smooth and deburr metal. It will also sharpen cutting tools and renew the edges on screwdrivers, pliers, tweezers, scribers and hundreds of other items. But, unlike other grinders, ours includes a unique wheel made of woven fibers impregnated with abrasive grains. This wheel gives your cutting tools a final buffing for a really sharp edge. It will also remove rust, paint and tarnish from most metals. The variable speed, another unique feature, lets you do intricate shaping of miniature parts (for most jobs you'll run the grinder at its maximum speed). Overall size 5" x 6" x 7". Wheels are 3" diameter x 3/4" wide. Variable speed, approx. 3,000 to 10,000 rpm. 110v AC motor with 5' cord.

#60730 Miniature Grinder . . List $109.95 . . Our Price **$79.95**

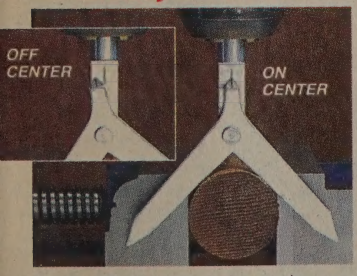
#60735 Replacement Grinding Wheel **$6.95**

#60736 Replacement Woven Abrasive Wheel **$6.95**

#82558 Flex Shaft Attachment. 33" long with 1/8" collet, key, drive adapter and grinding stone. **$29.95**



Special Indicator Locates Drill Chucks Exactly on Center

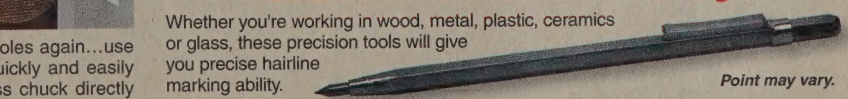


Never drill off-center holes again...use our center finder to quickly and easily position your drill press chuck directly above the exact center of a round workpiece. Indicator amplifies the slightest misalignment so you can adjust before drilling. 3/8" shank fits larger drill presses.

#82281 Center Finder for Round Stock **$7.95**

Scribers for Precise Hairline Marking

Whether you're working in wood, metal, plastic, ceramics or glass, these precision tools will give you precise hairline marking ability.



Point may vary.

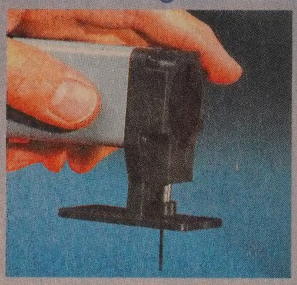
#50299 Tungsten Carbide Scriber Next to the diamond, tungsten carbide is considered to be the hardest material known. Has a finely honed needle sharp point mounted in a 5-1/2" long aluminum handle. Will scribe plastics for snap cutting. **$6.95**

#10105 Genuine Diamond Tip Scriber This scriber will do everything our carbide scriber will do and more. Even marks hardened steel and glass. For those who want the best. Hexagon handle, 1/4" diameter x 6 " long. **$14.95**

MicroLux MINIATURE POWER TOOLS

Our palm-size miniature power tools are ideal for model building, dollhouse miniatures and other smaller-than-life projects. They're versatile, dependable and powerful enough for the most demanding modeling jobs. **Note:** All tools operate from ***POWER BOOST*** **transformer** that plugs into standard 110v AC household outlet. Imported from Germany.

Jigsaw/Scroll Saw



Cuts intricate patterns and model parts in softwood, hardwood, plastic, fiber-glass, thin plywood and non-ferrous metal. Can be used freehand or converted quickly to a table top scroll saw using stationary table accessory #15245. Includes Allen wrench and 10 coarse saw blades for wood.

Specifications: weight, 9.2 oz.; length, 3-1/2"; speed, 1,800 to 6,900 rpm; motor, 12v DC, 1.0 amp.; max. cutting thickness, 9/32". Use with variable speed transformers #15232 and #60507 or cables #15233 and #15234.

#15226 Jigsaw/Scroll Saw . . List $59.95 . . Our Price **$44.95**

ACCESSORIES

#15243 Coarse Saw Blades (10) . . **$4.95**

#15244 Fine Saw Blades (10) . . **$4.95**

#15245 Stationary Table Attachment. Pressure against table turns saw on automatically **$6.95**

#15252 Diamond Grinding Blade. For micro filing and grinding of almost any material. **$9.95**

Heavy-Duty Right Angle Disk Sander/Drill

A versatile tool for removing rust, grinding metal, shaping and smoothing wood, plastic, fiberglass...and for drilling holes in places no other tool will go. Uses peel-and-stick sanding disks. Includes semi-rigid disk mounting wheel for finishing flat surfaces, hex wrench and 2 sanding disks.

Specifications: weight 12 oz.; length 5"; disk dia. 2-3/8"; speed 400 to 3300 rpm; motor, 12v DC, 110 watt. Use with variable speed transformer #60507 or with cables #15233 and #15234.

#82376 Right Angle Sander . . List $84.95 . . Our Price **$64.95**

ACCESSORIES

#82377 Peel-and-stick sanding disk set; 2 each of 60, 120 and 240 grits. 2-3/8" dia. **$4.95**

#82378 Flexible Disk Mounting Wheels for finishing curved surfaces. Lets you keep sanding disks of different grits mounted and ready to use. Set of 3. . . . . **$7.95**

#82379 Same as above, but semi-rigid for finishing flat surfaces. Set of 3. . . . . **$7.95**

#82380 3-piece Collet Set for holding bits and accessories with 1/32", 3/32" and 1/8" shanks. **$5.95**

#15238 3 Jaw Keyless Chuck. Use in place of collets for quick change of bits. 1/64" to 1/8" capacity. **$9.95**

Sword Saw

Works like a lightweight, miniature version of your electric-powered kitchen carving knife. Twin blades slide back-and-forth next to each other at 2,000 strokes per minute. You can hold it like a pencil and cut the most intricate patterns in balsa, basswood and other soft materials up to 3/8" thick; pine up to 3/16" thick.

Specifications: weight, 6.4 oz.; length, 6-3/4"; speed 100 to 2,000 strokes/min; motor, 12v DC, 2.5 amp. Use with variable speed transformer #60507 only.

#81858 Sword Saw . . . . . List $64.95 . . . . Our Price **$49.95**

#81859 Extra Blades (2 pair) **$3.95**

High Speed Drill/Grinder

The smallest and lightest drill/grinder available. It weighs just 5.4 oz. compared to the Dremel rotary tool at 16 oz. It's only 6-3/4" long and 5/8" in dia. at the working end, yet powerful enough for the toughest modeling projects. Includes 3 precision collets and wrench.

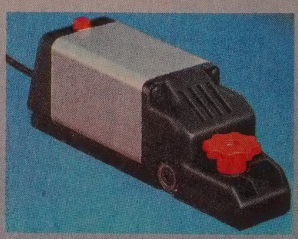
Specifications: weight, 5.4 oz.; length, 6-3/4"; speed, 5,600 to 21,000 rpm; motor, 12v DC,1.2 amp. Use with variable speed transformers #15232 and #60507 or cables #15233 and #15234.

#15230 High Speed Drill/Grinder
List $49.95 . . . . . Our Price **$36.95**

ACCESSORIES

#15238 3 Jaw Keyless Chuck. Use in place of collets for quick change of bits. 1/64" to 1/8" capacity. **$9.95**

#15241 Drill Press Adapter. Lets you use High Speed Drill with #15223 Drill Press shown on next page. **$4.95**



Power Plane

Special spiral cutter works as well on balsa as it will on hardwood or even Plexiglass! Easy to adjust knob lets you set depth of cut in an instant. Will plane material up to 1" wide in one pass. A truly unique and versatile tool. Includes Allen wrench for cutter replacement.

Specifications: weight, 11 oz.; length, 5-3/4"; speed, 4,600 to 17,000 rpm; motor, 12v DC, 1.4 amp. Use with variable speed transformer #60507 or cables #15233 and #15234.

#15228 Power Plane . . . . List $64.95 . . . . Our Price **$49.95**

#15237 Replacement Cutter **$16.95**

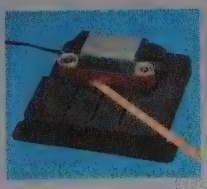
Belt Sander

Performs those tough sanding jobs, like the edges of plywood, fiberglass, plexiglass...even steel, brass and aluminum. Fabric backed belt rides on nylon rollers mounted in ball bearings. Pressure pad is impregnated with graphite to prevent friction and heat build up. Has a 1" wide belt and 7/8" diameter rollers. Includes one 80 grit belt and Allen wrench for belt tracking adjustment.

Specifications: weight, 12.8 oz; length, 4-1/4"; speed, 2,200 to 8,000 rpm; motor, 12v DC, 1.4 amp. Use with variable speed transformer #60507 or cables #15233 and 15234.

#15229 Belt Sander . . . . List $84.95 . . . . . Our Price **$64.95**

ACCESSORIES



#60528 Bench top holder holds belt sander on its side so you can guide the workpiece with both hands.. . . . . **$11.95**

#15239 80 grit belt **$1.95**
10 or more **$1.65 ea.**

#15240 120 grit belt **$1.95**
10 or more **$1.65 ea.**

Cross Saw

Recommended by expert gourd carvers

Gourd Carvers like our Cross Saw because it easily cuts through irregular, non-flat objects. The saw's small, rounded shoe permits high maneuverability on both smooth and bumpy surfaces and keeps the cutting line visible for increased accuracy. Includes Allen wrench and 10 coarse blades for soft woods and other craft items.

Specifications: weight, 9.2 oz.; length, 3-1/2"; speed, 1,800 to 6,900 rpm; motor, 12v DC, 1.0 amp.; max. cutting thickness, 9/32". Use with variable speed transformers #15232 and #60507 or cables #15233 and #15234.

#82088 Cross Saw . . . . List $64.95. . . . . Our Price **$49.95**

ACCESSORIES

#15243 Coarse Saw Blades (10) **$4.95**

#15244 Fine Saw Blades (10) **$4.95**

#15252 Diamond Grinding Blade. For micro filing and grinding of almost any material. **$9.95**

Orbital Sander

Sanding pad oscillates in a circular pattern, giving you smooth, scratch-free finishes. Use whenever you need a small compact sanding tool. Includes 2 sheets of peel and stick sandpaper.

Specifications: weight, 10.3 oz.; height, 4"; pad size, 2-1/2" x 3-1/2"; speed, 2,800 to 10,600 rpm; motor, 12v DC, 1.0 amp. Use with variable speed transformer #15232 and 60507 or cables #15233 or 15234.

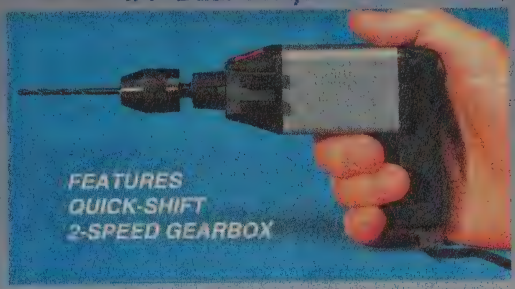
#15225 Orbital Sander . . . . List $52.95 . . . Our Price **$39.95**

ACCESSORIES

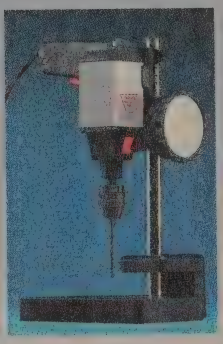
#15247 10 sheets peel & stick sandpaper, assort. grits . . **$5.29**

#15248 Extra Sander Pad. Snaps on/off. Lets you keep different grits mounted and ready to use. **$4.95**

1/4" Dual-Torque Drill



This drill changes torque at the flick of a switch. And you're not just changing voltage to the motor, but actually engaging a different gear ratio (8 to1) just like the transmission in your car. The extra high torque, extra low speed setting lets you drill perfect holes in steel, brass and other metals, and plastic won't melt, because there's virtually no friction heat build-up at this speed. For drilling in wood, just flick the switch back to the high speed setting! Includes 3 jaw keyless chuck with .016" to 1/4" capacity, on/off trigger switch and drill press attachment mounts.



Specifications: weight, 10 oz.; length, 5-3/4"; speed, 250 to 7,000 rpm; motor, 12v DC, 1.2 amp. Use with variable speed transformers #15232 and #60507 or cables #15233 and #15234.

#15222 1/4" Dual Torque Drill
List $69.95 . . . . Our Price **$54.95**

ACCESSORIES

#15223 Drill Press. Turns your 1/4" drill into a precision drill press. Turns drill on automatically as it is lowered. 5" x 5" table; 1-1/4" travel; 0" to 3" chuck to table adjustment. **$39.95**

Variable Speed Transformers with POWER BOOST circuitry

Our variable speed transformers provide the 12v DC power source for all power tools in this section. They employ *special feedback circuitry* that automatically boosts the power to the tool when it is under load so that the speed remains constant. Both plug into standard 110v AC household outlet.

A. #15232 Medium Duty, 1.8 amp output. For use with 15222, 15224,15225,15226, 15230 & 82088 only.
List $49.95 . . . . . Our Price **$39.95**

B. #60507 Heavy Duty, 4 amp output. Provides twice as much power and torque as transformer #15232. Will operate all tools, but is especially recommended for use with Belt Sander #15229, Power Plane #15228, Sword Saw #81858, and Right Angle Sander/Drill #82376.
List $89.95 . . . . . Our Price **$74.95**

POWER ACCESSORIES

#15233 Auto Adapter. Lets you power your tools from your car's cigarette lighter for field repairs. **$8.50**

#15234 Adapter With Bare Wire Ends. Lets you use power tools with any 12v DC power source...auto or boat battery, model airplane starter battery, etc. 20" cord. For longer reach, use with extension cord **$4.95**

#15235 10 Foot Extension Cord. **$6.95**

#15236 4-tool Plug Adapter. Lets you keep four tools plugged into transformer at the same time **$11.95**

OUR NO RISK GUARANTEE

Order the MicroLux Table Saw in the usual way by sending full payment or charging to your credit card. Then examine it risk-free for 30 days. If you decide not to keep it for any reason, simply return it (in resalable condition, please) via UPS or insured Priority Mail for an immediate refund.

The MicroLux Tilting Arbor Table Saw

Give away your old, underpowered saw and trade up to the best hobby-size table saw ever made!

Features

- High Torque, electronically rectified DC motor produces more torque and power than many motors rated at 1/2 hp and higher. And torque remains high, even at low rpm.
- Variable speed, from 3,600 to 7,000 rpm. Lets you cut plastic, aluminum, brass and other non-ferrous metals without overheating.
- Titling arbor for angle cuts up to 45°.
- Cuts a full 1" at 90°, 3/4" at 45°.
- Blade height adjusts from 0" to 1".
- 11-1/2" x 9 1/2" table with 9-1/2" x 9-1/2" machined aluminum surface.
- Two miter gauge slots for cutting from left or right side of blade.
- Ball bearing spindle.
- No-slip timing belt for more torque.
- Vacuum cleaner attachment.
- Up-front controls for on/off, speed, blade height and tilt.
- Table extension for cross-cutting long sheet stock.
- Plugs into standard 110v AC outlet.
- Compact size. Only 10" long x 11-1/2" wide x 7" high Weighs approx. 11 lbs.
- 1 year limited warranty.

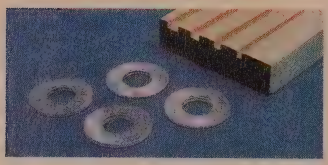
The MicroLux is more powerful, more accurate, and smoother running than any other saw its size. And it's the world's first variable speed table saw, so it will cut metal and plastic, as well as wood. This is, without a doubt, the most feature-packed machine ever designed for the scale modeler. Includes a self-aligning rip fence, calibrated miter gauge, blade guard and an 80 tooth fine cut blade for balsa and basswood up to 1" thick, hardwood up to 1/4" thick (hardwood up to 1" with optional carbide blade). Blade dia. 3-3/8" with 10mm hole. If you care about precision and are serious about producing quality work, don't delay, order your MicroLux saw today.

#80463 The MicroLux Tilting Arbor Table Saw . . . . . Retail $449.95
Our Price **$329.95**

#80793 Spare Drive Belt (size MXL) Older Models **$8.95**
#80850 Spare Drive Belt (size XL) Newest Models **$8.95**
Check old drive belt before ordering.

TABLE SAW ACCESSORIES

Dado Washers for the Microlux Saw



Special washers mount behind the blade to cut perfect 1/16", 3/32", 1/8" and 3/16" wide dado slots without making tedious trial and error adjustments. For use with 80 tooth standard blade only.

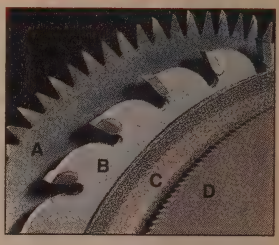
#80996 Dado Washer Set **$9.95**

Taper Jig

This beautifully machined tool is used whenever you need to make a wood or plastic part with an angle cut on its long dimension. Adjusts easily to any taper. Made of machined aluminum and steel with a nylon handle. 6" long.

#80605 Taper Jig **$14.95**

Saw Blades for the Microlux Table Saw



A. #80464 80 Tooth Standard Blade, .032" kerf. 3-3/8" diameter. 10mm hole. For softwood up to 1" and hardwood up to 1/4" thick. . . **$14.95**

B. #80465 24 Tooth Carbide Tip Blade, .070" kerf. 3-3/8" diameter. 10mm hole. For super-smooth cuts in all softwood, plywood and hardwood up to 1" thick, plastic over 1/16" thick, thin soft brass and aluminum. . . . **$29.95**

C. #81524 Diamond Blade for tile, stone, etc. .040" kerf. 3-3/8" diameter. 10mm hole. . **$79.95**

D. High Speed Steel Slitting Saws. 3" dia., 1/2" Hole. Must be used with adapter #80785, sold below. For slitting and slotting thin wood and plywood; cross cutting brass tubing and soft brass sheet under 1/16" thick; cross cutting delicate wood and plastic structural shapes.

#80466 168 Teeth, .045" kerf . . **$14.95** **#80803** 168 Teeth, .032" kerf . . **$14.95**
#80804 230 Teeth, .025" kerf . . **$14.95** **#80805** 230 Teeth, .020" kerf . . **$14.95**

#80785 Adapter for use with blades 80466-80805. Reduces 1/2" blade hole to fit 10mm shaft on MicroLux Table Saw **$3.95**

Ripping Gauges

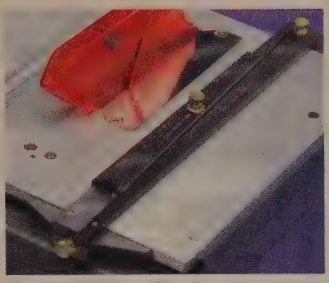
Trial and error cutting of narrow stripwood is time consuming and costly. Our brass gauges save you time and money. Just place the correct width gauge next to the blade & slide the rip fence up to it. Remove the gauge and you've got the exact spacing you need within .003". Set includes gauges for cutting 1/16", 3/32", 1/8", 5/32", 3/16", 1/4", 5/16", 3/8" and 1/2" widths. For other widths, use 2 or more gauges in combination. All gauges are 4" long.

#70224 Ripping Gauge Set **$13.95**

The Accuriser Gives You High Tolerance, Super Accurate Rip Cuts

ACCURISER II – FOR THE MICROLUX TILT ARBOR TABLE SAW

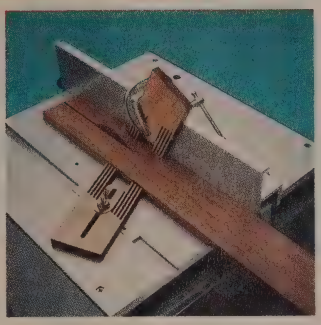
Rip stock to precise tolerances with this vernier adjustable rip fence. Has a self-aligning T-Square design with positive lock that holds it perfectly parallel to the blade. The sliding face of the fence adjusts in .005" increments so your cuts will be more accurate than you ever thought possible. This beautifully designed product is made in California to aerospace tolerances. Order yours today and experience the difference precise cuts can make to all your miniature projects.



#80467 The Accuriser II
List $59.95 . . . . . Our Price **$54.95**

Featherboard and High Fence Attachments Make Your Table Saw More Versatile

The support provided by a high fence allows you to make cuts that are safer, easier and more accurate. And you can mount jigs and attachments to a high fence that won't fit on a standard fence. Here's what you'll get:



1. 2" high x 10" long extruded aluminum rip fence. This attachment mounts to your existing fence in seconds with 3 clamping screws. It supports stock vertically, allowing you to make dado, rabbet, tenon and other edge cuts. You can also use home made push sticks, hold downs and other cutting jigs that slide along or clamp to the top edge and face of the fence to provide safer, more accurate cuts.

2. Vertical featherboard. Mounts to high fence with C-clamp (included). Flexible fingers hold stock tight against saw table and help prevent kick-back. Made of laser cut hardwood and steel.

3. Horizontal featherboard. Mounts in miter gauge slot with special expanding clamp. Flexible fingers hold stock tight against rip fence. Adjustable for different stock widths. Made of laser cut hardwood, aluminum and steel.

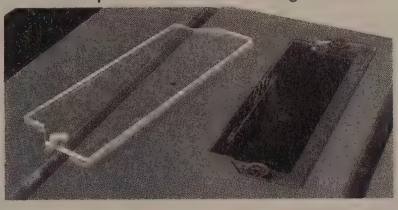
#80898 Featherboard and Fence Set for the MicroLux Table Saw **$34.95**

#80899 Replacement Horizontal Featherboard (Laser cut wood fingers only) . . **$5.95**

#80900 Replacement Vertical Featherboard (Laser cut wood fingers only) . . . **$5.95**

Blank Blade Plates for the Microlux Tilt Arbor Saw

The MicroLux Tilt Arbor Saw has a gap alongside the blade which permits the blade to be tilted. But this gap allows thin strips of wood to fall through the table. To eliminate the gap, install the blank plate and raise the blade to cut a new slot. Now thin strips of wood will stay above the table where they belong. Works on MicroLux Tilt Arbor Saws with 5-3/8" long blade plates only.



#82118 MicroLux Blank Blade Plates (2) **$9.95**

Special Blades for the Dremel Table Saw

CARBIDE TIPPED BLADES

4" dia. with 1/2" hole. Carbide tipped blades last 30 times longer than ordinary steel blades and give you super smooth cuts even in the toughest hardwood. These blades cut an ultra-thin kerf, a mere 3/64" wide. Made exclusively for Micro-Mark by Japan's largest industrial saw blade manufacturer.

#60293 20 tooth combination blade for general purpose work, either with or across the grain **$23.95**
#60294 40 tooth planer blade for extra smooth glue joints, thin wood and plastic **$29.95**

EXTRA-FINE STEEL BLADE

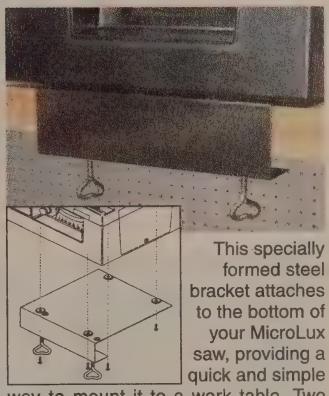
#50291 Jeweler's Slotting Saw. 4" dia. with 1/2" hole. 310 tooth, high speed steel, hollow-ground jeweler's slotting saw. Makes extremely fine cuts in most materials. Recommended for ripping very thin woods and for cross-cutting model railroad track, dollhouse molding, structural shapes and thin strips **$18.95**

Sliding Table for Precise Crosscuts

Guides on the bottom of the table slide in the grooves of the saw. The wide fence gives your work more support for 90° cuts. The triangles we supply give you perfect 30°, 45° & 60° cuts without resetting the miter gauge each time you change the angle of cut. Recommended for cuts in material up to 1/2" thick. Table is 10" x 12". Fence is 1-1/2" high.

#60729 For Dremel **$19.95**
#80468 For MicroLux **$19.95**

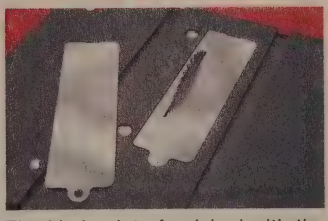
Easy-Mount Bench Bracket for Microlux Saws



This specially formed steel bracket attaches to the bottom of your MicroLux saw, providing a quick and simple way to mount it to a work table. Two screw-type clamps secure the bracket to table tops up to 2" thick. Foam pads protect the table top surface. Includes hardware and instructions for mounting saws #80463, #60514 and #50304.

#81387 Mounting Bracket **$19.95**

Blank Blade Plates for the Dremel Saw



The blade plate furnished with the Dremel table saw has a wide gap next to the blade so that it can be tilted. As a result, it's impossible to cut narrow strips of wood because they fall through the saw table. Our blank aluminum blade plates eliminate this large gap. Requires use of our #60294 carbide blade (purchased separately) to cut a new slot through blank blade plate, leaving virtually no gap.

#70225 Blank Blade Plates (2) . . **$13.50**

A Dremel Rotary Tool is a "must have" for the model maker and miniaturist. It does more than any other single tool you can buy. Dremel's powerful, high speed motors drive a wide variety of bits at speeds up to 30,000 rpm. Rotary tools, when hand-held or used with the large assortment of available attachments, are ideal for fast, precision cutting, grinding, shaping, drilling, engraving, polishing, deburring, smoothing, routing, shaping and carving of all types of materials, including wood, metal and plastic.

The Dremel Professional High Speed Rotary Tool – Designed for the Serious Modelmaker

The new model 398 Professional High Speed Rotary Tool is the latest addition to Dremel's line of hobby tools. It's the top-of-the-line model, combining high power, ergonomic styling and workshop versatility into one compact unit. It's also the first to incorporate sophisticated electronic circuitry to enhance performance: The speed control buttons and LCD readout let you select the exact speed you need (from 5,000 to 30,000 rpm in 1,000 rpm increments). Turn on the power and "soft-start" circuitry gently increases the motor's speed to the value you've selected. Then an internal feedback controller monitors the load and automatically adjusts motor torque to prevent the tool from stalling. And, for long life, Dremel uses a ball-bearing motor, replaceable motor brushes and a special fan design to reduce heat build-up. Includes a 10' flexible power cord that plugs into a standard 110v AC wall outlet. Compatible with all Dremel attachments and accessories.

#82053 Dremel Professional 3981 Set. Includes model 398 tool, 11-3/4" x 7-1/2" x 3-1/2" carrying/storage case with handle and 40 accessories. List $190.00 . . Our Price **$119.95**

#82271 Dremel Professional 3983 Set. Includes model 398 tool, large 12" x 8" x 8" "chest" type case with bit storage tray and 40 accessories. List $228.00 . . Our Price **$146.95**

Dremel's MultiPro – The Classic All-Purpose Rotary Tool

The Dremel MultiPro is the ideal choice for general purpose workshop and around-the-house chores. It's designed for rugged use and long life, with 30% more power than older models and a slim, easy-grip shape. Set includes model 395 rotary tool with a 5,000 to 30,000 rpm variable speed ball-bearing motor, built-in slide type speed control, deluxe 12-1/4" x 7-1/4" x 10-3/8" hang-up organizer, chuck and 54 accessories. 110v AC.

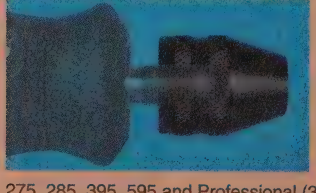
#82472 MultiPro 3965 Set (Motor housing color may vary)
List $119.95 . . . . . Our Price **$79.95**

$180.00 Retail Value... now only $104.45

New Ergonomic Styling!

The MultiPro Super Kit combines two popular Dremel tools into one great package. Includes the model 395/595 Variable Speed MultiPro Rotary Tool and the Flexible Shaft Attachment described on page 15. Also includes chuck, spring clamps and 75 accessories for grinding, carving, sanding, deburring, etc., a Guide Book describing more than 175 uses for these great tools, and a larger deluxe 11-3/4" x 8-1/2" x 51/2" storage case with handle and transparent, flip-open storage compartment lid that makes accessories easy to find.

#82592 MultiPro 3956-01 Super Kit . . . . Our Price **$104.45**



#81049 3-jaw keyless chuck screws directly on threaded portion of motor shaft for fast replacement of bits and accessories with 1/64" to 1/8" shanks. Fits Dremel rotary tool models 275, 285, 395, 595 and Professional (398) **$9.95**

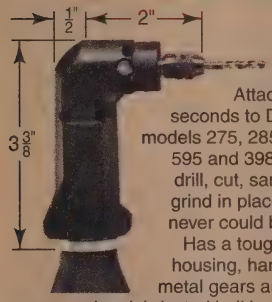
#60301 Micro Drill Bit Chuck with 1/8" shank locks into the collet of any model Dremel, Sears or Ryobi rotary tool. Will also work with hand drills and drill presses. Holds any small size drill bit from #61 (.039") to #80 (.0135"). Closes to 0. Recommended for use up to 10,000 rpm only. Nickel plated steel. **$5.50**

Shaper Table

Lets you make miniature molding, grooves, slots and decorative edges with your Dremel rotary tool. Injection molded with router bit guard, adjustable guide fence and depth-of-cut setting. Mounts to workbench with C clamps or screws (not included). Fits all Dremel rotary tools except Mini-Mite, MultiPro 7700 and model 260.

#60485 Shaper Table
List $44.95 . . . . Our Price **$36.95**

Right Angle Drive



Attaches in seconds to Dremel models 275, 285, 395, 595 and 398. It will drill, cut, sand and grind in places you never could before. Has a tough ABS housing, hardened metal gears and lifetime lubricated ball bearings.

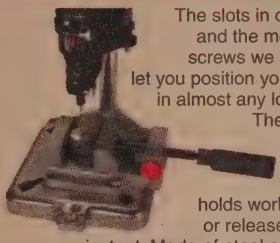
#50357 Right Angle Drive **$36.95**

Drill Press

For precision drilling, shaping and routing. 6" square work surface, 0" to 3" adjustable tool carriage, 3" throat, slotted table for guides and hold downs. Holds newer rotary tool models 275, 285, 395, 595 and 398.

#50288
Dremel
Drill Press
Attachment
List $58.95 . . . . . Our Price **$45.80**

NEW! Quick-Jaw Vise for Dremel's Drill Press



The slots in our vise and the mounting screws we provide let you position your work in almost any location. The spring action spindle latch holds work tightly or releases in an instant. Made of steel and cast aluminum. Jaws are 2-3/4" wide x 1" deep. One jaw has a horizontal V groove to hold round stock. 2-1/4" capacity.

#82546 Drill Press Vise **$24.95**

Clear Router Base

Our new router base lets you see your work for more accurate router work. Made of ultra-tough clear acrylic. Attaches in seconds to Dremel model 230 and model 330 (our #82033) without modification. 4" x 4" x 1/4". Can be used with or without edge guide.

#60715 Clear Router Base . . **$9.95**

Router Attachment

Now includes easy-guide handles and convenient bit storage compartments

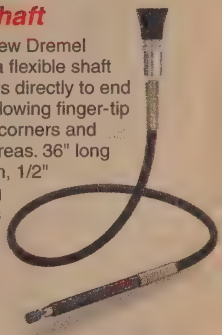
Calibrated depth adjustment for routing and shaping. Edge guide can be quickly removed for free-hand and surface routing. Guide adjusts from 0 to 4". Fits all Dremel rotary tools except Mini-Mite and MultiPro 7700.

#82033
Router
Attachment
List $36.50
Our Price **$28.95**

Flexible Shaft

Converts your new Dremel rotary tool into a flexible shaft machine. Screws directly to end of rotary tool, allowing finger-tip control for tight corners and hard-to-reach areas. 36" long with a super thin, 1/2" dia. ball-bearing hand-piece. Fits rotary tool models 275, 375, 395, 595 and 398.

#50352
Flexible Shaft
List $39.50 . . . . . Our Price **$28.95**



Holder and Base

Holds your tool firmly in any position so you can use two hands to control work piece. Fits all Dremel rotary tools except Mini-Mite, MultiPro 7700 and model 260.

#38267 Holder and Base
List $43.70 . . . . . Our Price **$34.95**

Dremel 1/5 HP Heavy Duty Flex-Shaft Machine

Designed and engineered for the professional and serious craftsman. Has much more power than rotary tools and other flexible shaft machines. Features a durable 39" neoprene covered flex shaft with strain reliefs, a high-torque, smooth running ball-bearing motor and nylon housing for long life. Runs at 20,000 rpm (without speed control).

#60887 Includes motor, flex shaft and lubricating grease only. Order your choice of handpiece and speed control below. . . . . List $163.90 . . . . . Our Price **$129.95**

Handpieces

A. #60889 Rugged 1" diameter aluminum housing with sealed ball bearings. Knurled, no-slip body for heavy duty work. Includes 1/8" and 1/4" collets.
List $80.90 . . . . . Our Price **$59.50**

#60888
Lightweight, 1/2" dia. aluminum housing with sealed ball bearings. Pencil type grip for intricate detail carving, engraving, grinding etc. Includes 3/32" and 1/8" collets.
List $57.30 . . . . . Our Price **$49.50**

Speed Control for #60887

B. #60891 Foot Control Pedal regulates speed. Solid state design provides precise control. Rugged steel construction with no-skid base. 6 amps max. List $68.10 . . . Our Price **$56.50**

Accessories

C. #60892 Flex Shaft Stand. Suspends tool above workbench. Adjusts from 12" to 42" high. Clamps to any bench or table up to 2" thick **$32.95**

D. #60893 Table Top Holder. 360° swivel base holds tool on workbench. 8" x 6" x 4". **$11.95**

Turn Any Dremel Rotary Tool or Power Drill into a Flexible Shaft Machine

Our flex shaft lets you use your older model rotary tool, hand drill or drill press as a flexible shaft machine (for Dremel models 275, 285, 395, 595, 398 and FreeWheeler, order our item #50352 on pg. 15). Light, slim, pen-size hand piece gets you into the tightest spots Accepts all rotary accessories and drill bits from 1/32" to 1/8". Drive end attaches to any 3/32" collet or drill chuck. Includes 4 collets and angle wrench. Bronze bearings let you work at speeds up to 20,000 rpm. 31" long.

#14260 Flexible Shaft **$24.95**

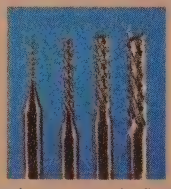
Note: When using flex shafts with Dremel rotary tools, we recommend you use holder #38267 shown on previous page.

Carbide Router Drills

These unique tools let you cut any shape in wood, plastic, glass, ceramic, aluminum, brass, fiberglass and almost any material except hard steel. Use for enlarging and shaping holes, scroll cutting, smoothing. Cuts its own starting hole and any shape in any direction tool is moved. 1/8" shank fits in any rotary tool. Made of solid carbide for 30 times longer life than steel.

#60717 1/16" Cutting Diameter . . **$7.95**
#60718 3/32" Cutting Diameter . . **$7.95**
#60719 1/8" Cutting Diameter . . . **$7.95**
#60795 Set of all 3, save $3.00 **$20.85**

"Fish-Tail" Carbide Router Bits



These long lasting carbide router bits with special "fish-tail" ends cut smooth, flat bottom holes in wood, hard plastic and fiberglass. 1/8" shanks make them ideal for use in the Dremel Router or Shaper Attachment. Can also be used in a Drill Press. Diamond pattern milled into side lets you smooth or shape edges of thin wood. 1-1/2" long. 1/8" shank.

#80245 1/32" Cutting Diameter . . **$7.95**
#80246 1/16" Cutting Diameter . . **$7.95**
#80247 3/32" Cutting Diameter . . **$7.95**
#80248 1/8" Cutting Diameter . . . **$7.95**
#80254 Set of all 4, save 20% **$25.44**

Dremel Sets Save You Money

125 PIECE ACCESSORY SET

Includes high speed cutters for carving, shaping and grooving soft metals, plastics and wood; cut-off wheels and mandrel for trimming metal, wood and plastic, slotting screw heads and cutting off screws and rusted bolts; sanders for shaping and cleaning; brushes and buffing wheels for general cleaning and polishing; grinding wheels and dressing stone for sharpening, deburring, removing rust. $103.48 total value if purchased separately.

#82108 Dremel 125 pc. Accessory Set
Save 58%! Our Price **$43.50**

52 Piece General Purpose Set

2 Grinding Stones	2 Mandrels
1 Wire Brush	4 Felt Polishing Wheel
1 Drum Sander	1 High Speed Cutter
37 Cut-off Wheels	4 Sanding Bands

#82543 . . . . . Total Value $37.95
Save 53%! Our Price **$17.95**

Quick 'n Easy Press-On Sanding Disks

Sanding disks and mandrel are quick and easy to use. When worn out, peel off the old disk and press on the new one. Disks are 1" diameter aluminum oxide.

50 DISKS/PKG.	$7.95/PKG.
#80477 80 grit	**#80479** 220 grit
#80478 120 grit	**#80480** 320 grit

#80481 1/8" Shank Flexible Rubber Holder for above disks **$2.75**
#80482 Best Buy! Save 20% Set of one of each item no. above. . . . **$27.50**

Indestructible Tungsten Carbide Sanding Bands

Tungsten carbide grains, permanently welded to a steel band, won't load up, won't break down, won't overheat. Use on wood, fiberglass and plastic. 1/2" dia. x 1/2" band fits your standard Dremel drum or order drum separately below.

#14463 Coarse Grit Band **$6.95**
#14464 Fine Grit Band **$6.95**
#14563 Drum,1/8" Shank **$2.60**
#50292 SAVE! Set of all Three **$14.95**

Router Bit Set

For putting a decorative edge on wood and for making miniature molding. Use with Dremel rotary tool with shaper or router attachment. 1/8" shank.

#82544 Set of 6 . . . . . **$42.95**

Standard Router Bits

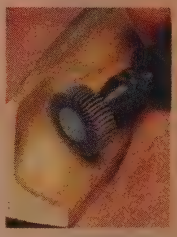
$8.75 each

#38224 1/8" Straight Bit
#38225 3/16" Straight Bit
#38226 1/4" Straight Bit
#38227 1/4" Veining Bit
#38228 1/4" Veining Bit
#38229 1/4" V-Groove Bit

For routing, inlaying, mortising in wood and other soft materials. 1/8" shank.

#38265 Set of 6. **SAVE $3.50** . . **$49.00**

Miniature Flap Wheels

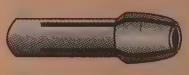


Ideal for sanding irregular or curved sections of wood, metal and fiberglass. 1/8" shank. 1-1/4" dia. x 3/8" wide.

#14130 Medium (80 grit) **$6.95**
#14131 Fine (180 grit) **$6.95**
#14132 Extra Fine (320 grit) . . . **$6.95**
#14160 SAVE! Set of all 3 . . . **$18.95**

Dremel Accessories

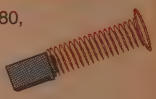
COLLETS (for all models) **$2.95 ea.**



#38250 1/8"
#38251 3/32"
#38252 1/16"
#38253 1/32"

Motor Brushes

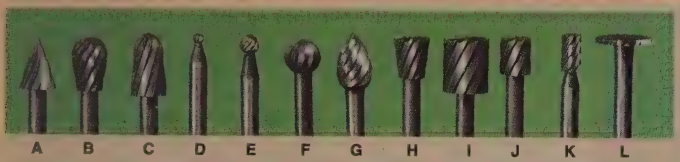
For models 270, 280, 370, 380
#15207 $4.25/pr



For models 275, 285,395 and 595 only.
#50289 (Type 1 & 2) **$4.00/pr**
#60605 (Type 3, 4, 5) **$4.00/pr**

WRENCH Fits collet nut of all Dremel rotary tools and Flex Shafts.

#60556 . . . . . **$1.40**

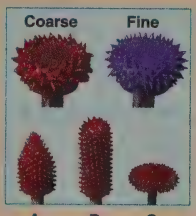


High Speed Steel Cutters $6.95 EACH

Made of high quality, high speed steel. Use for shaping, cutting and hollowing most metals, plastics and wood. 1/8" shanks.

A	#38181	E	#38171	I	#38176
B	#38165	F	#38161	J	#38175
C	#38178	G	#38163	K	#38174
D	#38169	H	#38177	L	#38184

Typhoon™ Carbide Burrs Remove Stock Quickly



Unique structurally aligned tungsten carbide points remove stock faster and leave a smoother finish than other types of tungsten carbide burrs. Typhoon burrs also last longer and do not load up quickly. Ideal for use on hard and soft woods, plastic, fiberglass and rubber. Use coarse burrs for rapid stock removal and fine burrs for finishing work. 1/8" shanks.

TYPHOON BURRS . . . . . $15.95 EACH

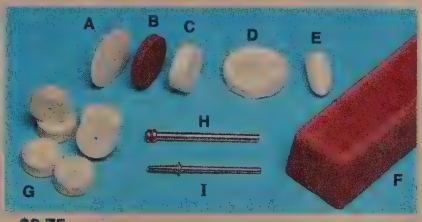
Item #	Fig	Dia	Lg	Grit	Item #	Fig	Dia	Lg	Grit
81957	A	1/4	1/2	Coarse	81962	B	1/4	1/2	Fine
81958	A	1/4	1/2	Fine	81963	C	1/2	1/8	Coarse
81959	B	1/8	3/4	Coarse	81964	C	1/2	1/8	Fine
81960	B	1/8	3/4	Fine	81965	C	3/4	1/8	Coarse
81961	B	1/4	1/2	Coarse	81966	C	3/4	1/8	Fine

Solid Carbide Cutters $9.95 ea.

Carbide cutters last up to twenty times longer than steel cutters, so in the long run you'll save money. All cutters have 1/8" shanks to fit Dremel and other rotary tools. Use to shape all materials except hard steel.

ITEM #	DIA.	ITEM #	DIA.
A 60671	1/4"	E 60677	1/4"
B 60672	1/4"	F 38185	1/8"
C 60674	1/4"	G 60679	1/16"
D 60676	1/4"	H 38193	1/8"

Polishing Accessories



A #15112 Knife edge wheel. 7/8" dia. Uses mandrel H **$2.40**

B #38241 Rubberized abrasive removes scratches on metal before polishing. 7/8" x 1/8". Uses mandrel H **$2.75**

C #15113 Square edge buffing wheel. 3/4" dia. Uses mandrel H **$1.75**

D #81680 Cloth buffing wheel. 1-1/2" dia. Uses mandrel H **$2.75**

E #38245 Buffing point. 3/8"dia. Uses mandrel I. **$2.75**

F #38246 Polishing compound for metals and plastic. Use with all buffing wheels. **$2.75**

G #38243 Buffing wheels, 1/2" dia. Set of 6. Uses mandrel I **$2.95**

H #14142 Buffing wheel mandrel **$2.40**

I #38219 Buffing wheel mandrel . . . **$2.75**

Miniature Drum Sander Set Smooths and Shapes Wood and Metal with Ease

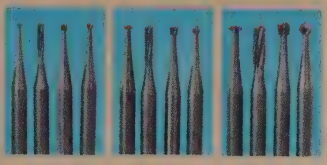
Get professional results in wood or metal with these hard-to-find miniature drum sanders. Abrasive band slips over rubber drum. Tightening screw on end of arbor expands drum to hold band securely in place. 1/8" shank fits flexible shafts, drill press or rotary tools. Set includes 1/4" dia. and 3/8" dia. x 1/2" long drums and 12 assorted bands.

#12101 Drum Sander Set. **$9.95**

Band refills 20 pcs/pkg

#12102 1/4" fine grit **$4.50**
#12103 1/4" medium grit **$4.50**
#12104 1/4" coarse grit **$4.50**
#12105 3/8" fine grit **$4.50**
#12106 3/8" medium grit **$4.50**
#12107 3/8" coarse grit **$4.50**

High Speed Steel Micro-Cutters



#60474 **#60475** **#60476**

These small engraving cutters are ideal for power engraving intricate details in wood, fiber, plastic and soft metals. 3/32" shanks fit Dremel, Sears and Micro-Mark high speed grinders, our power engraving tool and cordless drill. Sold in sets of 4.

#60474 Approx. 1/32" dia. head. **$5.95**
#60475 Approx. 3/64" dia. head. **$5.95**
#60476 Approx. 1/16" dia. head. **$5.95**

Brushes

#38207 **#38208** **#38209**

Small versatile steel brushes for efficiently removing rust and corrosion, polishing metal surfaces.
Wire Brushes . . . . . **$2.75 each**

#38210 **#38211** **#38212**

For cleaning and polishing silverware, jewelry and metal surfaces. Ideal for hard-to-reach places.
Bristle Brushes . . . . . **$2.75 each**

#15114 Brass brush won't scratch soft metals. 7/8" dia. **$2.75**

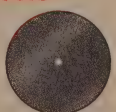
Sanding Accessories

Drum Sander
For smoothing and shaping wood, plastic, fiberglass and metal. Includes one band. 1/8" shank. 1/2" x 1/2".
#38213 Drum Sander.
$3.75 each

Drum Sander Bands
1/2" dia.
#38214 Coarse grit
#38215 Fine grit
Pack of six. **$2.75/ pack**

Sanding Disks.
3/4" diameter. Fit mandrel #14142
#38216 Coarse grit
#38217 Medium grit
#38218 Fine grit
36 disks in plastic tube. . . **$3.30/tube**

Cutting Wheels



Emery Cutting Wheels.
For cutting off metal rods, tubes, music wire and other hardened steel. 15/16" diameter.
#38249 36 pcs/ pkg. . . . . **$7.95/pkg.**
#14142 Mandrel for above. . . . **$2.40**

Dremel MultiPro 7700...It's Small, Cordless and Powerful

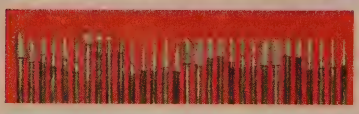
The MultiPro 7700 from Dremel has 50% more power than the Mini-Mite, but still retains the comfort and convenience of a lightweight, cordless tool. A 7.2 volt battery pack provides the extra power and speed needed for tough jobs. It features a ball-bearing motor, a tough nylon housing for long life and a two speed power switch for selection of 7,500 or 15,000 rpm. The included 1/8" collet holds hundreds of available accessories for drilling, sanding, grinding, cutting and more. (See the rotary tool accessories page in this catalog for other available collet sizes and accessories). It features a removable battery pack so you can have an extra battery charging while using the other. Set includes the MultiPro 7700 with quick-change, wrench-less collet nut, wall mount charger, battery pack, 50 accessories, 11-3/4" x 7-1/2" x 3-1/2" storage case, owner's manual and guidebook. Only 6-7/8" long. Weighs just 11-1/4 ounces. Move up to powerful, cordless convenience. Order the MultiPro 7700 today!

#81309 MultiPro 7700 . . . . . List $82.00 . . . . . Our Price **$55.40**
#81334 Extra 7.2v Battery Pack . . . List $29.00 . . . Our Price **$24.95**
#15264 3 Jaw Keyless Chuck (see page 19 for description) . . **$12.95**
#60301 Micro Chuck (see page 14 for description) **$5.50**

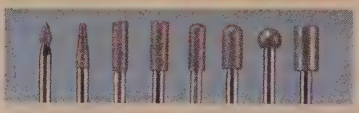
Diamond Coated Micro Burrs Smooth and Shape Almost Anything

Burrs coated with real industrial diamonds let you grind, engrave, smooth and shape wood, plastic, metal...even hardened steel and glass. They're also used for sharpening steel and carbide tipped cutting tools. Shanks are 1/8" so they'll fit Dremel, Foredom and other high speed rotary tools. Sets include a plastic storage case.

#80919 Standard Set. Includes 20 different shapes with cutting diameters up to 1/8". **$12.95**



#82260 Expanded Set. Includes 30 different shapes with cutting diameters up to 3/16". **$19.95**



#81094 Jumbo Set. Includes 8 different shapes with cutting diameters up to 1/4". **$12.95**

Larger Size Diamond-Coated Bits Smooth, Sharpen and Shape

Use these 1/8" shank bits in Dremel, Ryobi and MicroLux rotary tools, drill presses and hand drills. Their larger size makes them ideal for sharpening all types of cutting tools, including carbide. Also use to shape and smooth glass, hard plastics, wood and hardened steel.

#81416 3/4" dia. x 3/8" drum . . . **$5.95** **#81417** 3/4" dia. x 3/8" V-shape . . . **$6.95**

Diamond Core Drills for Hard-To-Drill Materials

Diamond core drills are the best tools for drilling smooth, clean holes in glass, ceramics, stone, fiberglass and other hard materials. 1/8" shank fits all rotary tools.

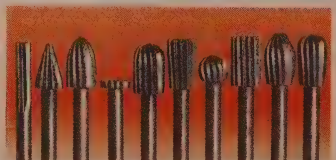
#81418 3/8" dia. core drill . . . . . **$5.95** **#81419** 1/4" dia. core drill **$5.95**

Diamond Wheel Set

Includes ten 3/4" dia. x 1/32" thick diamond-coated steel wheels and two mandrels. Ideal for cutting off or grooving extra-hard materials.

#82259 Diamond Wheel Set **$19.95**

High Speed Steel Cutter Set... Contours Wood, Plastic and More



We purchased a manufacturer's overstock of these first quality cutters at a great price and we're passing the savings on to you. 10 pc. set includes all shapes shown. Use for shaping, cutting and hollowing soft brass, wood and plastic. 1/8" shank fits Dremel rotary tools, drill presses, etc. Blackened for longer life.

#80470 Cutter Set . . . . . Value $44.95 . . . . . Now only **$27.50**

Time Saving Snap-On, Snap-Off Sanding Disks

You'll really appreciate the convenience of these unique sanding disks. Now you can change disks without fumbling with screws or changing mandrels. Special mandrel snaps into disk's brass center. Holds securely until you remove it. 7/8" dia. disks. All disks are packaged 50/box. Requires special mandrel #14233 (sold below).

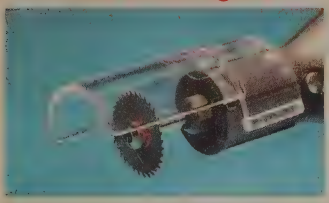
#14227 Aluminum Oxide, fine . . . **$5.95**
#14228 Aluminum Oxide, med. . . **$5.95**
#14229 Aluminum Oxide, coarse **$5.95**
#14230 Sil.Carb (wet or dry) x-fine **$5.95**
#14231 Sil. Carb (wet or dry) fine **$5.95**
#14232 Sil.Carb (wet or dry) med. **$5.95**
#14233 Snap-on mandrel. 3/32" dia. shank **$4.95**

Organizer Keeps Your Rotary Bits Protected and Ready for Use

Keep your rotary bits organized and in full view for fast, easy selection. Unique design adjusts to the angle that suits you best: from flat to almost vertical as shown. Made of machined high-impact plastic with 65 holes for 1/8" shank and 28 holes for 3/32" shank accessories. 5-1/2" square.

#81403 Rotary Bit Organizer . . **$12.95**

Knose-Guard Protects Your Face and Fingers



Add the Knose-Guard to your Dremel rotary tool and protect your face and arms from flying debris. Knose-Guard's clear polycarbonate shield won't obstruct your vision, and its larger nose cap improves your grip while protecting your fingers from the rotating collet nut. Replaces the nose cap on Dremel models 275, 285, 395, 595 and 398. Use with bits up to 1" diameter. Shield quickly snaps off when not needed.

#82303 Knose-Guard **$8.95**

Solid Carbide Micro Bits

Carbide bits stay sharp far longer than other drill bits and the 1/8" shanks fit in one size rotary tool collet. Set includes 10 sizes from #39 to #73. Industrial users pay up to $4.00 each for these bits, but since we buy first quality overstocks, we get a great price and pass the savings on to you. **Note:** We never know what the manufacturer will have as overstocks when we order, so sizes from set to set may vary.

#60310 10-pc. Carbide Bit set. . **$13.80**

50 Piece Carbide Bit Set

Premium quality, resharpened industrial grade carbide bits in random sizes, typically ranging from #80 (.0135") through #12 (.189"). May include several duplicates and some rasp/router shapes. All have 1/8" shanks. A great value at less than 40 cents each! Made in USA.

#82151 50-piece Carbide Bit Set **$19.95**

Because carbide is more brittle than steel, we cannot guarantee carbide bits against breakage.

Mini-Mite–The Smallest, Lightest Dremel Rotary Tool, and It's Cordless!

The Mini-Mite fits comfortably in your hand, has a slim, easy-grip neck and is lighter, smaller and more controllable than any rotary tool you've tried. For building models and other miniature projects, nothing can beat it. And new advances in motor miniaturization have made the Mini-Mite surprisingly powerful. It features a removable ni-cad battery pack so you can have an extra battery charging while using the other. Runs for one hour, no-load, on a full charge. Has a 2-speed selector switch (approx. 5,000 and 10,000 rpm–tested slow enough to drill plastic without melting). Set includes Mini-Mite with 1/8" collet, five accessory bits, removable battery pack, wall mount charger and quick-change, wrench-less collet nut. Nylon housing and ball-bearings for long life. Only 6-1/2" long. Weighs just 9 ounces. Order the Mini-Mite today and trade-up to pinpoint accuracy.

Wall mount battery charger included.

Compare. Smaller than the 110v AC model.

#60702 Dremel Mini-Mite . . List $54.60 Our Price **$36.95**

#60703 Spare 4.8v Battery Pack . . . . . List $22.30. . . . . Our Price **$19.95**

#15264 3 Jaw Chuck for Mini-Mite (See description below). **$12.95**

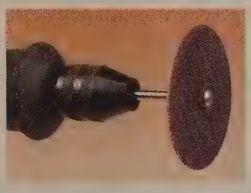
#60301 Micro Chuck for Mini-Mite (See page 14 for description). **$5.50**

No Hassle 3 Jaw Chuck for Mini-Mite, MultiPro 7700 and Older Dremel Rotary Tools

Tired of changing collets on your Dremel Moto-Tool every time you change the bit? If you are, then you'll love our keyless 3 jaw chuck. Now available for older Dremel and Sears Moto-Tools. Includes special adapter with 1/8" shank that fits into any rotary tool 1/8" collet. Holds drill bits and all accessories from 1/64" to 1/8". Recommended for speeds up to 10,000 rpm.

#15264 Universal 3 Jaw Chuck **$12.95**

Cut and Grind Almost Any Material with Our Fiberglass Reinforced Cut-Off Wheels



These 1-1/2" diameter cut-off wheels are the same type used by the steel industry, but in miniature sizes for miniature work. The fiberglass reinforcement resists breakage common to plain cut-off wheels.

#14140 For glass, plastic, ceramic, aluminum, copper, brass. .050" thick, 2 disks/pkg. **$4.50**

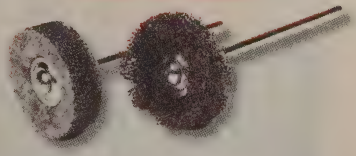
#14141 For steel, steel alloys, hard bronze, other high tensile strength material. .050" thick, 2 disks/pkg. . **$4.50**

#81758 ***Ultra-thin***
For fine precision cuts on steel, steel alloys, hard bronze, other high tensile strength material. Only .033" thick, 2 disks/pkg. **$5.75**

#14142 1/8" Shank Mandrel for above wheels **$2.40**

#81770 SAVE! Set of all four. . . **$15.75**

Mini Texture Wheels Put a Satin Finish on Metal



Texture wheels are great for putting satin finishes on brass, steel and aluminum surfaces. Will safely clean and remove tarnish from R/C plane and car engines, model railroad wheel treads, ship parts, etc. Also use to prepare surfaces for soldering. Wheels are 7/8" dia. x 1/4" thick with 3/32" dia. shafts.

#81848 Set of 2 Texture Wheels: 1 Hard and 1 Soft **$6.95**

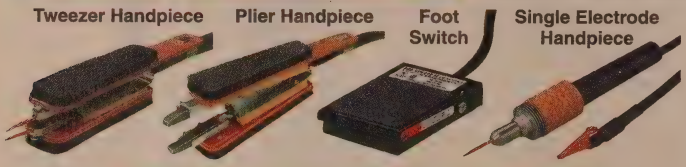
101 Piece Spring Assortment

A complete assortment of industrial quality extension, torsion and compression springs at less than 5¢ a piece.

#81774 Spring Assortment **$5.95**

Resistance Soldering – The Easy, Professional Way to Solder

This will be one of the most useful tools you'll ever purchase for model building. It will save you countless hours and make soldering a far less tedious and difficult task. How it works: Just hold the part to be soldered in the handpiece and depress the foot switch. The power supply passes a safe low voltage, high amperage electrical current through the part, instantly heating it to soldering temperatures. Apply solder, then release the foot switch. The bond is complete…*in just seconds!* The heat is generated only in the workpiece, so other pieces you've already soldered won't fall off. And since you dial-in the amount of heat you need at the power supply (from 1 to 250 watts, depending on model), you can solder everything from the tiniest etched parts to heavy castings. A resistance soldering unit concentrates heat at the joint, so it will heat larger work than will a conventional soldering iron of the same power. Use for soldering power feeds to model railroad track (the fast, pinpoint concentration of heat won't melt nearby plastic ties), brass trestle construction, turnout fabrication, rail joining, brass scratch-built items, ship model railings, fittings and more. Works on any material that can be soldered. Use the tweezer handpiece for delicate work: fine wire, chain, etched detail parts, RR rail. The plier handpiece is for larger parts: castings, brass structural shapes,etc. American Beauty brand made in the USA to heavy-duty industrial standards. Order your high-performance resistance soldering outfit today for the fastest, easiest, cleanest solder joints you've ever seen.



Complete Resistance Soldering Outfit

Includes 110v AC power supply, handpiece and foot switch.

ITEM#	POWER	HANDPIECE	LIST	OUR PRICE
#80417A	100 watts	TWEEZER	$428.95	**$350.95**
#81560A	100 watts	PLIER	$458.95	**$374.95**
#80462A	250 watts	TWEEZER	$513.95	**$420.95**
#81561A	250 watts	PLIER	$543.95	**$444.95**

220v AC versions are available by special order. Please contact our Customer Service Department at 908-464-6764 for information.

#80765 Tweezer Handpiece only with .078" diameter pointed electrodes. . **$129.95**
#80418 Extra Electrodes for Tweezer Handpiece (6) **$13.95**

#81527 Plier Handpiece only with 1/4" square shapable carbon electrodes. . **$159.95**
#81559 Extra Electrodes for Plier Handpiece (2). **$22.95**

#80419A Single Electrode Hand-piece with 48" cord plus ground lead with clip and 60" cord. Use for applications that are not suitable for tweezer or plier use. Clip is attached to one part and electrode is touched to the other. **$114.95**

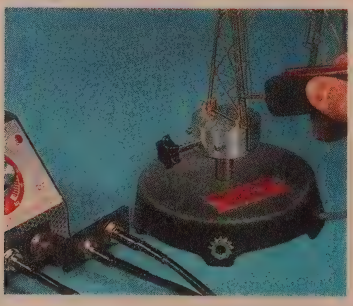
#80420 Extra Electrodes for Single Electrode Handpiece (6) **$30.95**

Stay-Brite™ Silver Solder

The premium solder that solders **all** metals except aluminum (including stainless steel and cast iron). It flows freely and smoothly and is 5 times stronger than ordinary solder. Melts and flows at only 430°F, providing strength without distortion. Includes a 1/2 oz. coil of solder and 1/2 oz. bottle of flux. Can be used with resistance soldering equipment, soldering iron or torch. Lead free.

#80822 Stay-Brite Silver Solder **$8.95**
(Shipped by UPS ground only).

The "Roundhouse" Makes Resistance Soldering Even Easier



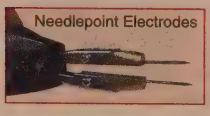
The "Roundhouse" holds items to be soldered while providing a ground for the single electrode hand piece. It can also be used with your soldering tweezers or pliers in conjunction with Y-Adapter sold at right. This converts both jaws of your tweezers or pliers to carry the power while the Roundhouse completes the circuit. The workpiece vise is solder-resistant polished aluminum with adjustable chromed pins. Base is heavy iron for no-tip stability. Also includes 3' power supply lead, 1' auxiliary lead with alligator clip and instructions. 5-1/2" dia. x 3-1/2" high.

#81420 "Roundhouse" **$139.95**

#81413 Y-Adapter. Connects both jaws of soldering tweezers to one terminal of power supply. **$29.95**

Resistance Soldering Tool at an Economical Price

The Triton Soldering Tool is the economical way to experience the versatility of resistance soldering. How it works: squeezing the handle moves the jaws together to clamp the work. Squeezing a bit more turns the power on and heats the parts. When the solder flows (in just seconds), release pressure on the handle…simple, but effective. Set includes tweezer with general purpose carbon electrodes, heavy duty transformer with dual connections for either 50 or 100 watts*, and instructions. For fine work, order needlepoint electrodes below.



#82111 Triton Soldering Tool **$147.95**
#82112 Replacement Carbon Electrodes **$7.50**
#82113 Needlepoint Electrodes **$16.25**

**Since a resistance soldering unit concentrates heat at the joint, it will heat larger work than will a conventional soldering iron of the same power.*

Variable Temperature Electronic Soldering Station

Weller's soldering station gives you a higher level of performance than you can get with a standard gun or iron, but without the cost of an industrial type soldering tool. Features variable power control from 5 to 40 watts (up to 900°F), allowing one tool to do the work of several. You can solder fine electronic wires or brass rod with the same tool. Includes iron with cushioned foam grip and #81017 standard tip, on/off switch with power-on light, safety guard iron holder and sponge tip cleaning pad.

#81014 Soldering Station **$71.95**

Soldering Iron Tips

#81015 1/32" Micro Tip **$6.95**
#81016 1/16" Mini Tip **$6.95**
#81017 1/8" Standard Tip **$6.95**

Solder in Fast, Easy Paste Form

Just apply a small amount of solder paste from the convenient, no-waste syringe and heat with soldering iron or torch. The paste bubbles away, leaving a clean, bright, hard joint that won't tarnish.

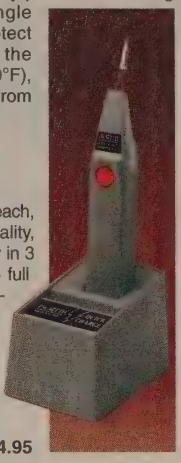
#60664 Silver Bearing Solder Five times stronger than ordinary solder with a tensile strength up to 25,000 psi. Flows smoothly at just 430°F. Solders all metals, except aluminum, zinc and pot metals (even solders stainless steel). Ideal for jewelry, models, autos, electrical connections and more. Contains no lead or corrosive materials. 7.1 grams **$7.95**

"Your customer service and technical advice is on a par with the best hobby shops."

Glenn H., Milltown, NJ

Industrial Quality Iso-Tip Cordless Soldering Irons Heat in Just 5-10 Seconds

Now you can perform soldering operations away from your workbench without power cords that weigh you down or get tangled. Made specifically for the hobbyist and electronic technician, these battery-powered soldering irons can make up to 125 solder joints on a single charge. Interchangeable ceramic-insulated tips protect sensitive electronic components and determine the wattage and heat generated (up to 50 watts and 700°F), so one basic soldering iron can handle everything from delicate electronic wire to heavy brass rail.



Cordless Soldering Iron with Recharging Stand

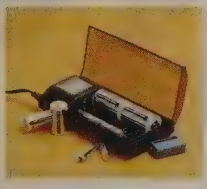
Convenient recharging stand keeps your iron easy to reach, on constant charge and ready to solder. Premium-quality, hard-wired, internal Ni-Cad battery recharges completely in 3 to 4-1/2 hours; a partially discharged battery returns to full capacity in less than one hour. Battery cannot overcharge, so you can keep your soldering iron in the charging stand indefinitely. Set includes cordless soldering iron, recharging stand, work light and "lock-off" switch, one fine tip (our #50314), 1 heavy duty tip (our #50315) and instruction booklet.

#50313 Iso-Tip Cordless Soldering Iron
List $63.95 . . . . . Our Price **$54.95**

Cordless Soldering Iron with Quick-Change Batteries

Cordless soldering iron uses standard "C" cell rechargeable Ni-Cad batteries (2 req'd) that you exchange for fully charged ones when power runs low. Makes up to 120 solder joints between battery changes. Includes iron, two 1400mA-hr Ni-Cad batteries, quick-change battery door, fine soldering tip (our #50314), tip cover, handy storage compartment and instruction booklet.

#82383 Iso-Tip EZ Change Soldering Iron **$39.95**

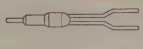


Automatic Battery Charger

Slim-profile, universal Ni-Cad Battery Charger recharges two or four AAA, AA, C, or D cells in just 5 hours, or up to two 9v cells in 14 hours. Has special circuitry that keeps batteries from overcharging. Includes LED indicator and reverse-polarity protection.

#82384 Universal Battery Charger **$27.95**

Replacement Tips for Cordless Soldering Irons



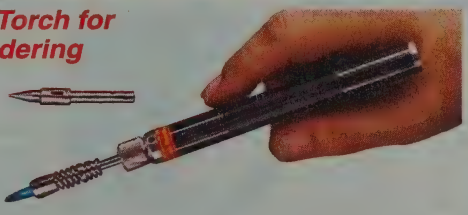
#50314 Fine Tip **$5.50**

#50315 Heavy Duty Tip (high wattage) **$5.50**

#50316 Heavy Duty Beveled Tip (high wattage) **$5.50**

#50317 Micro Soldering Tip **$5.50**

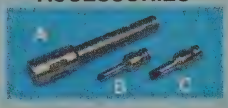
Pen Size Mini-Torch for Delicate Soldering



You'll appreciate the precise control this mini torch gives you for delicate soldering jobs. Beautifully made of plated brass and steel with adjustable flame size and temperature control. Includes a soldering attachment that converts your torch to a cordless soldering iron in seconds. Simply slide torch head off and slide iron head on. Flame burning inside soldering tip acts similar to a catalytic converter, giving you a tip temperature up to 750°F. Maximum temperature when used as a torch is 2,300°F. Burns up to 1 hour as a torch, 2 hours as a soldering iron. Comes with pointed soldering tip for electrical and electronic soldering. 8-1/4" long with 3/4" dia. barrel. Optional tips for soldering brass and copper strips, rods and shapes are sold at right. Refills easily from standard cigarette lighter butane fuel.

#60395 Pen Size Mini-Torch **$24.95**

ACCESSORIES



A. #81353 Extra Soldering Head **$7.50**

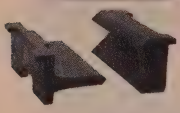
B. #60456 2.5 mm beveled solder tip **$2.75**

C. #60457 3 mm chisel tip **$2.75**

#60909 Butane Fuel, 38 grams **$2.79**

(Fuel shipped via UPS ground only).

Turn Your Bench Vise into a Powerful Bending Brake



Position this cast steel die set on the jaws of your bench vise to convert it into a powerful sheet metal bending brake. Bends sheet metal up to 90°. Strong magnets and alignment tabs keep dies in place. Fits most large workbench vises. Dies are 3" wide x 1" high.

#82375 Bending Die Set
List $16.95 . . . . . Our Price **$11.95**

Jeweler's and Machinist's Secret to Smooth Finishes in Tight Places

Round, abrasive cords and flat tape make it possible to smooth and polish hard-to-reach places inaccessible to most conventional tools. Excellent for use on miniature wood, metal and plastic turnings while they're still in the lathe. Both cords and tapes are aluminum oxide and come in "adhesive tape" containers, 16 yds. per container.

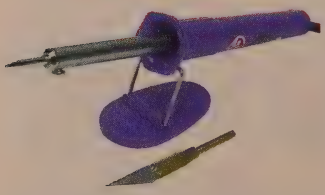
Cords

#12108 .055" dia., 120 grit. . . . **$13.95**
#12109 .030" dia., 200 grit. . . . **$13.95**

Tape

#12110 3/32" wide, 180 grit. . . **$14.95**
#12117 Buy all 3 (save $3.00). . **$39.85**

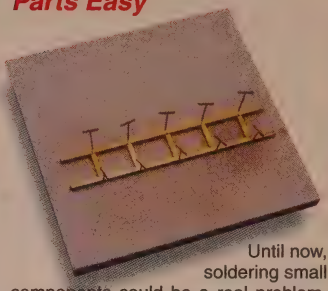
Soldering Iron Doubles as Hot Knife Cutting Tool



Compact, lightweight, 30 watt soldering iron with steel barrel and heat resistant handle develops up to 720°F. Pencil-point tip gets into the tightest places. Handle stays cool while you work. Hot knife attachment cuts and welds styrene and other plastics easily.

#17107 Soldering Iron/Hot Knife . . **$13.95**
#14360 Extra Blades for above (15) . . **$3.95**

Soldering Pad Makes Soldering Small Parts Easy

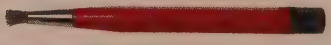


Until now, soldering small components could be a real problem. If you soldered 2 parts together and then tried to add a third or fourth part, the first joint would come apart. Our soldering pad solves this problem. Just place all components on the pad and hold together with T pins. Then heat each joint and apply solder. The ceramic fiber pad withstands temperatures up to 2,800°F and is soft enough to accept our T pins easily. 1/2" thick.

#70219 Soldering Pad, 6" x 6". . **$12.95**
#80751 Soldering Pad, 6" x 12". . **$22.95**
#70220 Pad, 12" x 12" **$29.95**
#14318 T Pins, 50 pcs. **$3.25**

Scratch Brush Cleans Metal for Soldering

The Scratch Brush easily cleans away oxidation, dust and paint from brass, steel, copper, nickel silver and other solderable metals so that solder sticks properly. Retractable metal bristles adjust like a mechanical pencil so that Scratch Brush can reach where larger brushes can't.



#82466A Scratch Brush **$9.95**
#82467 Brush Refills (3) **$3.50**

Soldering Iron Stand Helps Prevent Burns

The safest place to keep your soldering iron or hot knife cutting tool when in use. The sponge, when moistened, keeps the iron tip clean and removes excess solder. Chrome-plated coils with a 3-1/4" x 5" enameled steel base. Fits our soldering iron/knife #17107, micro torch #60395 and most other soldering irons with barrels up to 3/4". 5-1/2" high.

#60381 Soldering Iron Stand . . **$9.95**

Tix – The Hardest Soft Solder on Earth

Easy flowing solder melts at only 275°F and yet has the holding power of 4300 pounds per square inch. Adheres to all solderable metals and works with soldering iron, gun or torch. Will not tarnish. The jeweler's choice for years. Package of twenty 3" long sticks.

#17110 TIX Solder . . **$13.75**

TIX Flux. Cleans and prepares metal for best solder adhesion. Works with any soft solder. Washes off with water.

#17111 TIX Flux . . **$3.25**

TIX Anti-Flux. Prevents solder from flowing to unwanted areas. Brushes on easily.

#17112 TIX Anti-Flux **$3.25**

"I love your products and service. Shipping is always fast...quality of your materials is the best that I've used."

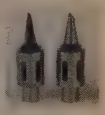
Steve R.
email

Pinpoint Propane Torch Burns for 29 Hours

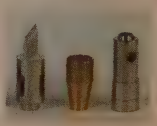
This torch produces a pinpoint flame much finer than ordinary propane torches sold in hardware stores. It features a lightweight handle with built-in flame adjusting control knob. Attaches easily to standard disposable propane tanks available at any hardware store. Burns at 3,350°F. Includes torch with 4' hose, pinpoint flame tip and torch stand. Propane tank not included. For even more versatility, order additional tips below.

#81657 Pinpoint Propane Torch . . **$54.95**

#81665 Optional Soldering Tip Set. Converts torch to a soldering iron. Includes 1.0mm and 2.4mm solder tips. **$16.95**



#81666 Optional Hobby Tip Set. Includes flameless hot air tip, hot knife tip and an extra pinpoint tip. . **$16.95**



Mini Sander/Filer for Effortless Finishing of Small Parts

The world's smallest power sander will save you hours of tedious hand sanding and filing of small, intricate parts. Sanding wands and micro-size needle files snap-fit over the reciprocating head allowing you to change grits and file shapes in seconds. Use for model building, jewelry making, miniatures, ceramics, metal working, etc. Works great on plastic, wood, metal and most other materials. Complete set includes sander/filer, charging stand (cordless model only), sanding wand, 4 needle files. Wands are 5/8" wide x 2-1/8" long. Made in USA by Wahl.

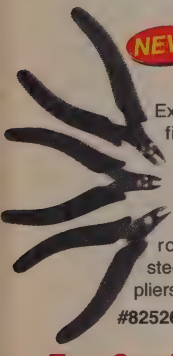
#81065 Cordless Sander/Filer
List $84.50 . . . . . Our Price **$68.95**

#81277 110v AC Corded Sander/Filer
List $84.50 . . . . . Our Price **$68.95**

Sander/Filer Accessories $4.50 ea.

#81068 Sander Wands (3)
#81069 100 Grit Self-Stick sandpaper strips (12)
#81070 220 Grit Self-Stick sandpaper strips (12)
#81071 400 Grit Self Stick sandpaper strips (12)
#81072 Flat Needle File
#81073 Round Needle File
#81074 Triangle Needle File
#81075 Half Round Needle File

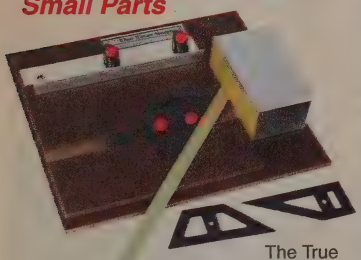
NEW! Aerospace Style Mini Shears With a New Angle



Extra fine jaws reach into confined spaces. Tip angles of 21°, 45° and a unique *reverse angle* of -45° permit both front- and rear-side access. 3-plier set has corrosion-resistive blackened steel jaws, spring-loaded handles and cushioned no-slip grips. All pliers are 5" long. *Grip color may vary.*

#82526 Cutting Plier Set . . . . . List $26.95 . . . . . Our Price **$19.95**

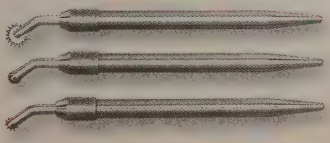
True Sander Gives Precision Finish on Small Parts



The True Sander is designed to give you a quick, precision finish on wood, plastic and metal sheet and strip stock. Also works beautifully to square-up cut ends of brass tubing. Use whenever you need a fine, precise fit of parts, such as inlay work, marquetry, toys, miniature window framing, doll house furniture and model structural components. Works on material up to 4" wide x 1" thick x any length. Four sided sanding block lets you have four different grits mounted at the same time. Standard sandpaper is held to block with tape or rubber cement. Includes pre-set angle guides for 30, 45, 60 and 90 degrees plus protractor type guide for any angle in between.

#14475 True Sander **$29.95**

Pounce Wheels Explained



Use #1. TRANSFERRING DRAWINGS FROM PAPER TO WOOD. Just roll the pounce wheel over the drawing and it perforates tiny holes in the paper. Place the paper over the wood. Then rub powdered chalk (the kind used for snap lines; available at any hardware store) over the perforated holes. The chalk goes through the holes and marks the wood.

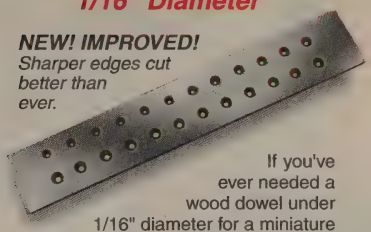
Use #2. SIMULATING RIVETS ON MODELS. Works on wood, plastic and sheet brass up to .010" thick.

Aluminum handles with steel wheels. Tighten chuck for straight lines or loosen for curves. Sold in a set of three; 15/64" diameter x .041" spacing, 1/4" diameter x .066" spacing and 7/16" diameter x .072" spacing.

#15200 Pounce Wheel Set . . . **$14.95**

The Only Way to Get a Wood Dowel Under 1/16" Diameter

NEW! IMPROVED!
Sharper edges cut better than ever.



If you've ever needed a wood dowel under 1/16" diameter for a miniature or scale model project, you know they just are not available. (Ship modelers: remember those Tree Nails you couldn't find?). The only way you can get them is to make them yourself with our Draw Plate designed specifically for shaving wood. How it works: the steel plate has a series of tapered holes which range from approximately 3/32" dia. to 020" dia. To get a 1/32" dia. dowel, for example, start with a 1/16" dowel or a 1/16" x 1/16" square strip. Insert the end into the smallest hole the dowel or strip will fit into and pull from the opposite side. As you pull, the steel edge of the hole shaves the wood. Then go to the next smaller hole and repeat. Continue like this until you have the size you need. Made of hardened steel, approximately 5-1/2" x 1" x 3/32".

#50330 Jeweler's Draw Plate
List $36.95 . . . . . Our Price **$19.95**

HARDWOOD DOWELS
#50200 .085" diameter (1/16" nominal) x 12" long, 10 pieces **$1.50**

Modeler's Multi-Tool Does it All

First, this is the most comfortable knife handle you've ever used and the adjustable chuck will hold every hobbycraft blade made. Second, it's the finest pin vise we've ever seen. The brass chuck and 4 collets will hold drill bits from #77 (.018") to 1/8". Third, it's an indispensible hand vise for holding micro-size parts while filing, drilling, cutting and more. The knurled brass tensioning knob at the back end draws all items tightly into the chuck. Handle and vise head are molded nylon. All other components are solid brass. 1/2" x 5" handle. 1/2" vise capacity. A beautifully made tool!

#60531 Modeler's Multi-Tool
List $32.95 . . . . . Our Price **$25.95**

The MicroLux Multi-Saw, a Power Coping Saw, Scroll Saw and Jeweler's Saw... All in One!

No More Sanding! No More Filing! You'll Get Ultrafine Precision Cuts Even On Micro-Size Parts

This is one of the world's only power saws that can use ultrafine jeweler's saw blades for the finest cuts you've ever seen! Here is the power saw you've been waiting for...designed and sized for hundreds of small projects. Cuts everything from soft balsa wood to light gauge, non-ferrous materials...copper, brass, aluminum and plastic. It will even cut styrofoam without shredding or tearing! Plus, you can cut narrow strips from wide sheets or make angle cuts with the rip fence and miter gauge we include. Join the thousands of modelers and miniaturists world wide who now use the MicroLux Multi-Saw. Order yours today!

Compare: More Quality, More Value, More Versatility!

• Cast aluminum alloy yoke • 6-1/4" x 6-1/4" cast aluminum table with smoothly machined surface • Table extension for support of longer workpieces • Blade tension adjustment screw • Accepts most standard jeweler's and coping saw blades • Adjustable blade guide holds work against table • 1/10 hp high torque, 110v AC motor • Built-in dial-type variable speed control, 600 to 2,700 strokes/min • Adjustable rip fence cuts on left or right of blade • 0-90° miter gauge • 12" yoke depth cuts to the center of a 24" board • Cutting capacity: 2" balsa, 1/2" hardwood/plywood, 1/32" brass, 1/16" aluminum • Dust catcher compartment with sliding door • Includes 4 saw blades for wood.

#60514 MicroLux Multi-Saw . . . . . List $184.95 . . . . . Our Price **$149.95**

STANDARD SAW BLADES 12/PACK $5.50/PACK

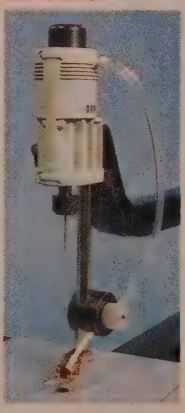
ITEM#	W	THICK	TPI	USE	TYPE	ITEM#	W	THICK	TPI	USE	TYPE
60496	.022	.010	28	WP	PLN	81117	.034	.032	46	WP	SP
60497	.029	.012	20	WP	PLN	60503	.024	.012	48	MP	PLN
60498	.038	.016	12	WP	PLN	60504	.033	.016	36	MP	PLN
60499	.045	.017	11	WP	PLN	60505	.041	.019	30	MP	PLN
60500	.062	.020	9	WP	PLN						

PREMIUM SAW BLADES 10/PACK $9.95/PACK

80856	.045	.020	40	WP	PLN	80857	.069	.027	17	W	PLN

W=wood, P=plastic, M=metal, PLN=plain end, SP=spiral blade, plain end, cuts in any direction, TPI=teeth/inch. All blade dimensions subject to 10% variation.

Dust Blower Attachment Improves the Accuracy of Your Cuts



Our attachment for the MicroLux Multi-Saw creates a gentle flow of air to keep your cutting line clear... and a clear cutting line means fewer mistakes, improved accuracy and less wasted material. adjustable nozzle blows where you aim it. Attaches in minutes with just a screwdriver.

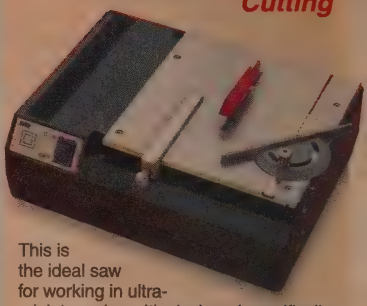
#80997 Dust Blower. . . . . List $37.95
Our Price **$29.95**

Sponge Rubber Pad Reduces Vibration and Noise of Bench Top Power Tools

Scroll saws, sanders, compressors, band saws, grinders and other small bench top tools have a tendency to vibrate because of their light weight and small size. Our anti-vibration pad cuts down on annoying vibration dramatically. And because it acts like an insulator between the machine and the table, it also reduces noise. Can be cut to size easily with household scissors. 12" x 18" x 3/8" thick.

#80243 Anti-Vibration Pad **$9.95**
2 or more **$8.95 ea.**

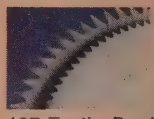
World's Smallest Table Saw for Micro Size Cutting



This is the ideal saw for working in ultra-miniature sizes. It's designed specifically for rip-cutting narrow strips from sheet stock and for cross-cutting to close tolerances. It will even cut wood and plastic structural shapes and miniature molding if used with our optional fine tooth blade. Cuts both softwood and hardwood up to 1/4" thick and plywood up to 3/16" thick. Features a sturdy 6-1/4" x 6-1/4" stationary aluminum table, adjustable rip fence, 0-90° miter gauge, blade guard, dust catcher compartment with sliding door, benchtop mounting holes, up-front on/off switch, standard blade, 1/10hp 110v AC motor with belt drive and 6 ft. cord. Takes up only 7-1/4" x 9-1/2" of your valuable workbench space. Fixed position 2" blade.

#50304 MicroLux Miniature Table Saw
List $164.95 . . . . . Our Price **$119.95**

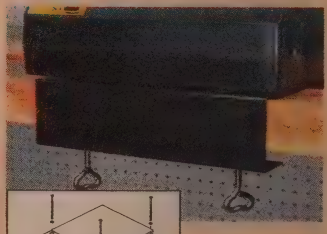
Saw Blades for Miniature Table Saw

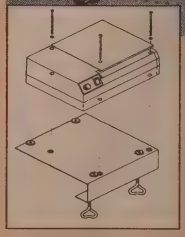


#50320 Replacement Standard Blade, 80 Teeth . . . **$13.95**

#15220 Fine Blade, 107 Teeth. Produces extra smooth cross cuts on all woods...even balsa. Recommended for very thin wood and for cutting miniature molding and structural shapes. (Not for ripping). . . **$17.95**

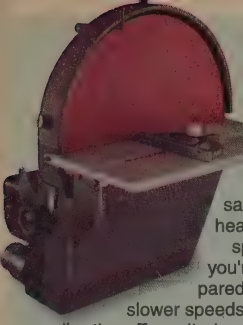
Easy-Mount Bench Bracket for Microlux Saws





This specially formed steel bracket attaches to the bottom of your MicroLux saw, providing a quick and simple way to mount it to a work table. 2 screw-type clamps secure the bracket to table tops up to 2" thick. Foam pads protect the table top surface. Includes hardware and instructions for mounting saws #80463, #60514 and #50304.

#81387 Mounting Bracket **$19.95**



Professional Model Maker's 10" Disk Sander

There's never been another sander this well made or versatile. The electronic variable speed control lets you run the sander at extra slow speeds so over heating is virtually eliminated. You'll never again have a melted, gooey glob when sanding plastics. And metal won't distort from the burning heat most sanders produce. To sand wood, just turn up the speed to the correct setting for the hardness of the wood you're working in. The disk turns at only 280-480 rpm, compared to other sanders that run as high as 5,000 rpm. These slower speeds allow the sander to run smoothly and quietly with almost no vibration. For mitering, sanding to a line, smoothing and shaping, no other power tool we've tried works as well or is easier to use. Includes 3 assorted grit sanding disks and miter gauge.

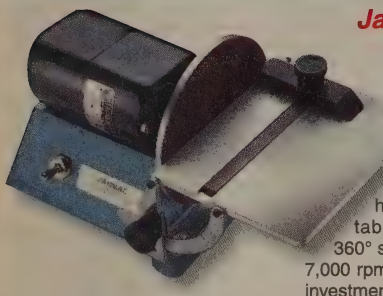
Features

- High torque, electronically rectified DC motor produces more power than many motors rated 1/2 hp and higher.
- Variable speed 280-480 rpm.
- Cast aluminum housing.
- 10" cast aluminum disk.
- Vacuum cleaner attachment.
- Compact size. Only 11-1/2" wide x 13-1/2" high x 9-1/2" deep.
- 4-5/8" x 10-3/4" machine finished aluminum table with miter gauge slot. Table tilts to 45°.
- Plugs into standard 110v AC outlet.

#80849 Disk Sander . . . . . List $259.95 . . . . . Our Price **$199.95**

10" Aluminum Oxide Cloth-Backed Self-Adhesive Disks
$3.20 each

#80862 80 Grit
#80863 120 Grit
#80864 180 Grit
#80865 240 Grit



Jarmac's 4" Tilt-Table Disk Sander

A well made, vibration-free tool for precision sanding and grinding. Forms clean, smooth edges on wood, plastic and metal at any angle. Also good for sharpening chisels and other small hand tools. 4"x 5" slotted aluminum table tilts from 90° to 30°. Includes 360° steel miter gauge. 110v AC, 1/16 hp 7,000 rpm motor. A worthwhile and long term investment for any shop.

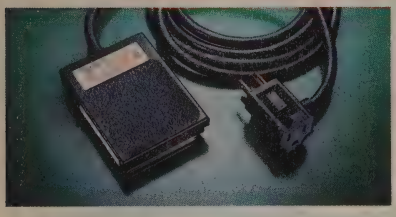
#14172 Jarmac 4" Disk Sander . . . . . List $169.50 . . . . . Our Price **$144.95**

Cloth Backed Self-Adhesive Sanding Disks for Above

#14173 Fine Grit, 3/pkg . . . . **$2.95/pkg.** **#14174** Medium Grit, 3/pkg . . **$2.95/pkg.**

#14171 Variable speed foot-operated rheostat for Jarmac disk sander lets you adjust speed to suit material. 1.2 amps max . . . **$36.50**

Foot Switch Turns Your Power Tools On/Off Hands Free



This high quality industrial foot switch is ideal for use with air brush compressors, scroll saws, disk sanders, drill presses, etc. Press pedal for "on," release for "off." Has no-slip rubber pads on both sides. 7 amp max. capacity. 6' cord.

#80766 Foot Switch **$28.95**

Special Drill Bits Cut Clean, Round Holes in Wood

These special drill bits have 2 cutting spurs that start and shape perfectly round holes. Then, super sharp flutes actually shave the wood to a smooth polished finish. Will not tear wood grain, clog or bind, even in balsa wood. And in harder woods, the special brad points keep the bit from "walking" off the mark. Once you've used these, you'll never go back to metal cutting bits for your woodworking projects. Set of 7 bits: 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2".

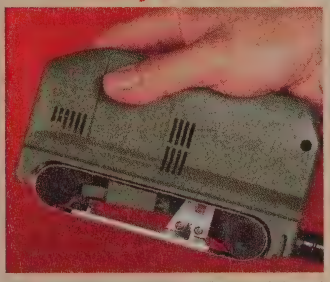
#14391 Drill Bit Set for Wood **$14.95**

Animation Brings Your Diorama to Life

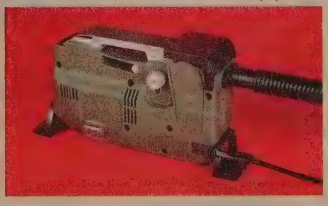
Make your own rotating signs, waterwheels, carousels, railroad turntables, machinery, moving figures and other special effects that will set your diorama or model railroad apart from others. 2" diameter x 1" long lifetime-lubricated, high-torque 110vAC gearmotor has a .275" (7mm) diameter x 5/8" (16mm) long shaft that turns at a constant 2.5 rpm. Linkages attach easily to 1/8" (3.18mm) cross hole in shaft. Includes convenient mounting flanges. 6' cord includes ON-OFF switch. Stall torque: 6 in-lbs min.

#82090 Animation Gearmotor
List $16.95 . . . . . Our Price **$12.95**

Variable Speed Belt Sander is Powerful, Yet Easy to Handle



Our belt sander is ideal for model and miniature work. Its light weight and small size give you the control larger belt sanders can't. Use for shaping and smoothing wood, metal, fiberglass and plastic. Also sharpens chisels, knives and other edge tools. Features a retractable pressure pad for contour sanding of convex surfaces, 600 to 900 ft/min variable speed, guide fence and a standard vacuum hook-up port.



Can be mounted upside down to your work bench with clamps (included) for precision sanding and sharpening. Only 6-1/2" long overall with a 1-3/16" x 3-1/4" sanding platen. Includes 2 sanding belts. 110v AC. Color may vary. Made in Japan.

#81466 Belt Sander
List $159.95 . . . . . Our Price **$129.95**

Sanding Belts
$2.75 ea.
10 or more of one grit $2.35 ea.
#81564 100 grit **#81467** 180 grit
#81468 240 grit

The Finest, Most Versatile Vise You'll Ever Own

Hold it anywhere you want it! This professional quality vise will undoubtedly be the most used and useful tool on your workbench. Panavise tilts, turns and rotates to any angle or position with one turn of the control knob. The vise head and base are pressure-cast aluminum alloy with steel and brass inserts. Jaws are 2-1/2" wide, replaceable satin finish nylon for increased grip and gentle strength. Jaw opens to 2-1/4". The variable load control knob and exclusive split ball feature permits moving work to any position.

#21123 Complete Panavise **$42.95**
#21124 Optional Steel Jaws **$5.95**
#21125 Replacement Nylon Jaws **$3.50**
#82419 Head only **$23.95**
#82418 Base only **$19.95**

Panavise wide opening head.

Opens a full 6" with jaw width of 1-3/4". Satin black oxide finish greatly reduces glare. Reversible and replaceable neoprene jaw pads have molded ribs for firm, yet gentle holding power. Ideal for holding model railroad rolling stock, cameras and other delicate items.

#82417 Wide Opening Head/Base Combo . . **$45.95**
#21127 Wide Opening Head only **$30.95**
#82418 Base only **$19.95**
#21128 Replacement Neoprene Jaw Pads . . . **$3.95**

Panavise bench clamp mount.

Lets you move your Panavise to different locations. Securely mounts to edge of work-bench, table or counter up to 3-1/2" thick. Mounting screws included.

(Fits nos. 21123, 82417 and 82418 only)

#21126 Bench Clamp Mount **$38.95**

Panavise Jr.

Has the same positioning features as the standard Panavise, but is smaller, lighter, and as you might expect, less expensive. Jaws are fiber reinforced plastic and open to 2-7/8". Base is die cast zinc, approx. 4-1/2" in diameter. This is a beautiful tool made specifically for light duty holding and assembly.

#81008 Panavise Jr. **$21.95**

Miniature Woodworker's Bench for Controlled Access to Your Work

Our scaled-down woodworker's bench works the same way as the $300.00 full size benches do, but in a size that's perfect for all types of small woodworking projects. Made in Germany of hard, select beech, milled and sanded to perfection. Removable and adjustable bench dogs hold work from 1-1/2" to 14-1/2". 4-1/4" wide vises hold work up to 2" thick. Includes two C clamps for portable mounting to any workbench or table up to 1-1/4" thick. 6-5/8" wide x 15-1/4" long (not including vise extensions). 1-1/8" thick.

#15211 Miniature Woodworker's Bench . . . . . List $72.95 . . . . . Our Price **$62.95**

Miniature Saw Blades Cut Wood, Plastic, Fiberglass and Soft Metals

Hard-to-find miniature saw blades are precision ground tools of drop forged, tempered high carbon steel. All are .015" thick with 1/8" hole.

#14133 3/4" dia., 36 teeth **$11.95**
#14134 3/4" dia., 60 teeth **$11.95**
#14135 1" dia., 68 teeth. **$12.95**
#14136 1" dia., 34 teeth. **$12.95**
#80324 1-1/2" dia., 100 teeth . **$17.95**
#14137 2" dia., 140 teeth. . . . **$19.95**
#14138 1/8" shank saw blade mandrel. **$2.95**

BUY THE SET AND SAVE $5.00

#81043 Saw and mandrel set. Includes one each of the above **$85.65**

SPECIALTY BLADES

#60552 Ultrathin blade set. Includes .005" thick x 7/8" dia. x 120 tooth blade and special 1/8" shank mandrel. Blade has 1/16" hole. **$9.95**

#60553 Replacement blade only. **$7.50**

RIP SAW BLADES

#60554 Coarse blade set for ripping wood. Includes two .021" thick x 7/8" dia. x 36 tooth blades and 1/8" shank mandrel. Set in teeth prevents binding when ripping hardwoods. Blade has 1/8" hole. **$17.95**

#60555 Replacement blade only. **$8.95**

#60861 Includes one .022" thick x 1-1/4" dia. x 48 tooth blade and 1/8" shank mandrel. Blade has 1/8" hole. **$14.95**

#60862 Replacement Blade Only **$12.95**

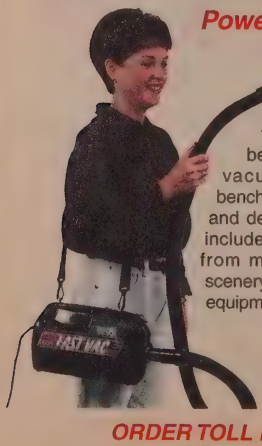
#81354 Fine blade set for ripping wood. Includes .018" thick x 2" dia x 140 tooth blade and 1/8" shank mandrel. Set in teeth prevents binding. Blade has 1/8" hole. **$17.95**

#81355 Replacement blade only. **$15.95**

"Thank you for your fast and accurate order filling."

Cas G., Chicago, IL

Powerful Hand-Held Vacuum Cleans Where Other Vacs Can't Reach



The Fast Vac 500 is a light weight, powerful vacuum with 12 special attachments and a 25' long cord that lets you clean areas impossible to reach with other models. Designed to be hand-held or worn over-the-shoulder, this vacuum cleans not only floors and work benches, but also sensitive electronic equipment and delicate models with the microbrush set we include. Use the Fast Vac 500 to remove chips from machine tools, brighten model railroad scenery, clean dust from dollhouses, photographic equipment, computer keyboards, shelves, etc. Also includes an activated charcoal filter that eliminates odors.

#82058 Fast Vac 500 . . . . . List $119.95 . . . . . Our Price **$99.95**

#82059 Extra-large disposable bags save you time and money. Package of 3 . . . . . **$3.95**
3 or more packages **$3.50 ea.**

Dimensioned Mini Square Cuts Layout Time in Half

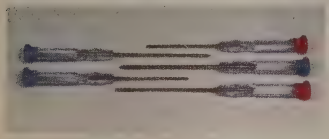
Our mini square has markings on both the outside and *inside* edges so that measuring and marking is quick, easy and accurate. And it's made of stainless steel, so it also works as a cutting guide for your knife. Especially handy for measuring and cutting scale model window openings and glazing. 3" x 4" overall with acid-etched 1/32" increments for a lifetime of use.

#82147 Mini Square **$7.95**

Technicians Screwdrivers Have Extra-Long Reach

The thin profile and extra-long shanks of these technicians screwdrivers let you reach into locations inaccessible with standard screwdrivers. Blades are made of high-alloy steel with a special no-slip finish at the tip. And the slim, dual-contour acrylic handles have rotating finger cups at the back end for added control. 5-piece set includes 3/32" and 1/8" flat blades plus Phillips nos. 00, 0 and 1. Length: 6-5/8" to 7-3/4". 1/2" diameter. Made in USA. Lifetime warranty.

#82127 MicroTech Screwdriver Set. **$16.95**



4-Piece Machinist's Pin Vise Set

This well-made steel pin vise set features knurled no-slip grips and a black oxide finish to resist corrosion. Set holds drill bits and wire from 0 to 3/16". Handles are 3-1/2" to 4-1/4" long, 5/16" to 1/2" diameter.

#81497 Four-Piece Pin Vise Set . . **$10.95**

Delta Bench-Top Mini Disk/Belt Sander

Delta's power disk/belt sander is a rugged, solidly built tool that can save you hours of hand sanding. Beautifully designed, with features found in heavy duty professional woodworking machinery. Use for shaping, smoothing, sharpening and for trimming model parts precisely to your marked line. Can be used on all woods, metals and plastics. Miter gauge and calibrated tilt table allow sanding of compound curves.

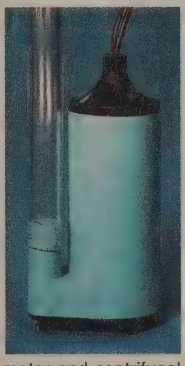
• 5" square cast aluminum table that tilts up to 60° and locks into place for angle sanding • Removable belt support platen for finishing intricate or curved work • Belt tracking and tension adjustment keeps belts on rollers and makes belt changes easy • Heavy duty, die cast aluminum frame • 1/4 hp, 110v AC, 3450 rpm quiet running induction motor • Base is fitted with rubber feet for smoother, quieter operation. • Lighted rocker switch • Outlet for attaching standard vacuum cleaner hose • 1" wide belt x 30" long. • Top pulley lets you sand inside curves • 5" disk with a 3-1/2" x 7-1/4" cast aluminum tilting table with miter gauge. • 14" x 14-1/2" x 11" overall. Includes one fine belt and one medium disk. Wt: 18 lbs.

#82218 Disk/Belt Sander . . . . . List $172.00 . . . . . Our Price **$139.95**

Belts and Disks $5.50 ea.

#38103 80 grit (medium) belt (2)
#38104 120 grit (fine) belt (2)
#38105 180 grit (extra fine) belt (2)
#38106 240 grit (ultra fine) belt (2)
#38109 80 grit (medium) disk (5)
#38110 120 grit (fine) disk (5)

Moving Water Makes the Scene



Real water enhances the realism of any model scene. Our miniature pump circulates water to flowing streams, babbling brooks, waterfalls, moving waterwheels, bubbling fountains, etc. The small, quiet and powerful DC submersible motor and centrifugal pump can lift water as high as 6 feet. Connects to 5/16" or 3/8" vinyl hose available at hardware stores. Use with train power pack or batteries. Specs: runs on DC voltages up to 12v; current draw 1amp @ 6v; 1.8a @ 12v.; capacity: 8.5 quarts/min.; overall size: 3-3/4" high x 1-1/4" x 1-7/8". 2' wire.

#82089 Miniature Water Pump
List $24.95 . . . . . Our Price **$19.95**

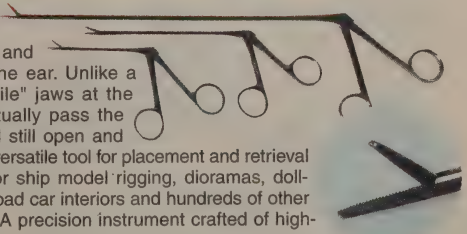
Micro-Vac...the Revolutionary Mini-Cleaner

You won't believe how well this miniature vacuum cleaner picks up dust and dirt particles! Excellent for cleaning ship models, railroad models, dollhouses, sewing machines, computer printers, audio, video and photographic equipment. High velocity motor runs on standard 9v battery (not included) or AC adapter sold separately below. Includes curved wand, brush and dust bag as shown, plus 1" wide brush and straight wand. Can also be used as a blower.

#14113 Micro-Vac . . . . . Retail $29.95
Our Price **$19.95**

#15188 AC Adapter. Eliminates battery and lets you run the Micro-Vac on standard household current **$9.95**

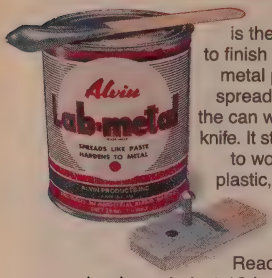
Crocodile Action Ear Polypus???



That's right. It's a brilliantly designed surgical instrument for removing foreign objects and performing surgery inside the ear. Unlike a hemostat, only the "crocodile" jaws at the very end open. You can actually pass the end through a 1/8" hole and still open and close the jaws! An extremely versatile tool for placement and retrieval of micro size objects. Use for ship model rigging, dioramas, dollhouse miniatures, model railroad car interiors and hundreds of other types of micro-manipulation. A precision instrument crafted of highly polished stainless steel.

#15265 Ear Polypus, 3-1/2". . . . . List $29.95 . . . . . Our Price **$16.95**
#60357 Ear Polypus, 5-1/2". . . . . List $32.95 . . . . . Our Price **$19.95**
#82561 Ear Polypus, 12" . . . . . List $67.95 . . . . . Our Price **$39.95**

Lab-metal *Spreads Like Paste and Hardens to Metal*

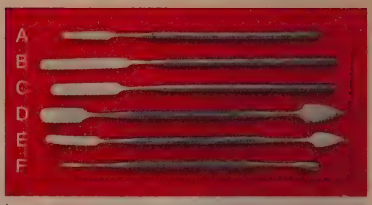


Lab-metal is the easy way to finish and repair metal parts. Just spread right from the can with a putty knife. It sticks tightly to wood, metal, plastic, glass and most other materials. Reaches maximum hardness in just 12 hours. Once hardened, Lab-metal can be drilled, tapped, filed, sanded and machined. And because it's filled with aluminum powder, it won't rust or rot. Use to form your own parts, repair holes, rust and dents in sheet metal, smooth rough and pitted surfaces on cast metal and to make wood and plastic look like real metal. Lab-metal can even be brushed on if thinned with solvent sold below. (Shipped via UPS ground only).

#80921 Lab-metal, 3/4 lb. can
List $19.95 . . . . . Our Price **$17.95**

#80922 Solvent, pint
List $13.50 . . . . . Our Price **$10.95**

Stainless Steel Miniature Putty Knives



Use for mixing, applying, spreading and smoothing epoxy, wood filler, glue, body filler, etc. Use on models, miniatures, small nail holes in toys, clocks, duck decoys, small boxes. All tools are beautifully made of highly polished stainless steel.

A. #60896 Flat, slightly flexible blade, rounded end and tapered sides. Tip is 1" x 3/16". 6" long. **$4.50**

B. #60897 Flat, very flexible blade, rounded end, straight sides. Tip is 2" x 1/4". 7" long. **$4.50**

C. #14482 Flat, slightly flexible blade, rounded end, straight sides. Tip is 1-1/2" x 5/16". 6-1/2" long. **$4.50**

D. #15131 Stiff blades, one end curved/ pointed, one end curved/round.Tips are 1"x 3/8". 7" long. **$5.95**

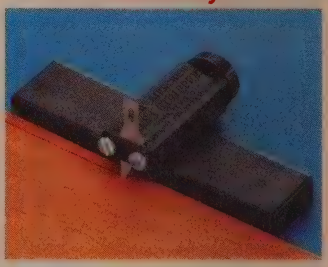
E. #60737 Stiff blades, one end curved/ rounded, one end pointed/flat. Pointed tip is 3/4" x 3/8", rounded tip is 1" x 3/16". 7" long **$5.95**

F. #60738 Stiff blades, 1 end pointed spoon shape, one end rounded spoon shape. Pointed end 3/32" wide, rounded end 1/4" wide. **$5.95**

"Wow! I never expected my shipment to arrive so quickly...even to a location half-way around the world. Thanks to all!"

John M., Taiwan, R.C.

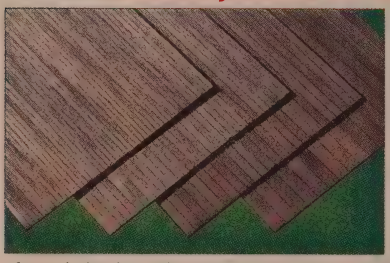
Wood Strip Cutter with Micrometer Accuracy



A precision wood strip cutter for model ship planking, dollhouse flooring, model airplanes, marquetry and inlay work. One turn of the vernier hand wheel moves the blade in and out at precise 1/32" increments. Cuts strips up to 1/2" wide. Uses standard size no. 11 blades for Balsa, or #24 blades for harder woods. Made of tough glass-filled nylon.

#14568 Wood Strip Cutter **$7.50**
#14360 #11 Blade (15). **$3.95**
#50280 #24 Blade (15). **$5.50**

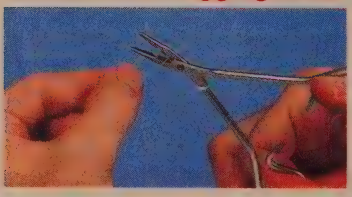
Board-by-Board Siding...In Sheets!



Experienced modelers know that realistic weather-beaten siding and decking is best simulated by gluing individual miniature planks of wood to a frame. This board-by-board construction avoids the uniform grain and color of milled wood sheets, but is time consuming and tedious. Now you can get the same appearance in 1/10th the time with our wood deck sheets. They are made of individual planks of wood glued together side-by-side in sheets 3" wide x 22" long x .050" thick. To give the wood a weather-beaten look as shown, stain with Age-It Easy (found elsewhere in this catalog) to bring out the grain and color of the individual planks.

#60857A 1/16" Plank Width **$8.25**
#60858A 3/32" Plank Width **$6.95**
#60859A 1/8" Plank Width **$6.95**
#60860A 3/16" Plank Width **$6.95**

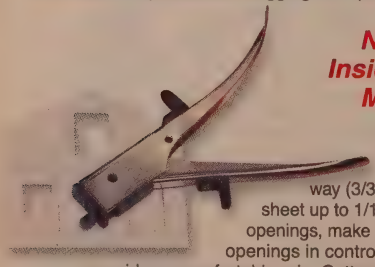
Ship Modeler's Tool Makes Rigging Faster and Easier



This is similar to the tool surgeons use to tie and trim suture knots quickly and accurately. And, with your rigging tool, we'll include simple instructions for tying the same knots. Jaws have both a 1/2" gripping surface and a 1/4" scissor surface. Once you use this tool, you'll wonder how you got along without it. Nickel-plated steel.

#81365A Ship Modeler's Rigging Tool (set of 2) **$6.95**

Nibbling Cutter Makes Inside Cuts in Plastic and Metal an Easy Task



Squeezing the handle of our nibbling cutter actuates an ultra-sharp punch and die set which quickly and cleanly "nibbles" its way (3/32" at a time) through soft metal and plastic sheet up to 1/16" thick. Use it to cut out window and door openings, make sheet metal templates and gauges, cut out openings in control panels, etc. Specially contoured handle provides a comfortable grip. Cutter width is 1/4"; overall length is approx. 8".

#81477 Nibbling Cutter **$10.95**

Wire Stripper Automatically Adjusts to Any Wire Size

Heavy-duty wire stripper automatically adjusts for wire sizes from #10 through #26. Use for thin wire found in model railroads, R/C models and doll-houses as well as heavier household and automotive wire. It's faster, easier and safer to use than other kinds of strippers. Also cuts wire and crimps terminals. It even strips twin wire cable. Made of steel with vinyl coated handles. 8-1/4" long.

#81317 Wire Stripper **$12.95**

Bare Metal Foil... Nothing Looks Better Than Real Metal

Photo by Dennis Doty.

You can try to use paint to get plastic scale models to look like metal, but, for the ultimate in realism, nothing can beat the real thing. Bare Metal Foil is adhesive backed real metal, only .0005" thick. It's easy to apply, conforms to all curvatures and allows details to show through. To use, cut a piece from the sheet slightly larger than the part to be covered. Burnish down with your fingernail, soft cloth or toothpick. Then trim excess with a sharp no. 11 blade. That's it! Great for all chrome trim on cars and trucks, brightwork on aircraft, railroads and rockets. Bare Metal Foil is also an excellent masking film. Each package contains **two** 6" x 12" sheets and complete instructions.

#81636 Ultra Bright Metal **$9.95**

Also available in matte finish for industrial/utility type surfaces:

#80795 Matte Aluminum **$9.95**

Patented Cam-Action Sprue Cutter

This fantastic tool was designed specifically for cutting the sprues from injection molded plastic parts. Its knife sharp edges and cam-action compound leverage design cuts like a hot knife through butter...and the special blade shape will cut clean and close to the part with no further trimming required. A precision tool with hardened and tempered steel jaws. Only 4" long. Guaranteed for a lifetime of sprue cutting use.

#15212 Sprue Cutting Plier.
List $36.95 . . . . . Our Price **$29.95**
#82444 Replacement Blade . . . **$22.95**

Seam Scraper for Plastic Models

There are others available, but this is the only one we've tested that really works! No other tool smooths glue seams or removes parting lines and flash better. The 3 super sharp cutting edges on the double-ended scraper blade are precision ground tool steel. The collet in the steel handle allows you to slide the scraper in and out to adjust for the amount of exposure you need. 2-3/4" long scraper blade. 4-1/2" long handle. Also deburrs aluminum, brass and other soft metals.

#80801 Seam Scraper . . . List $14.95
Our Price **$9.95**

Blue Magic...Absolutely the Best Polish for Metal

Blue Magic Metal Polish Cream performs its magic on every metal surface. It restores a showroom shine to chrome, aluminum and magnesium wheels, bumpers, trim and all other automotive surfaces...both full-size and miniature! Also polishes stainless steel, copper, brass, gold and silver, and is safe for fiberglass finishes. Its highly effective formula instantly removes oxidation, tarnish and dirt while it polishes, leaving a silicone film to protect the finish.

#81003 Blue Magic,19.38 oz. jar . . **$11.95**
#82458A Polish Mates. Package of 50 disposable, non-abrasive, absorbent, lint-free 12" x 12" cloths. Perfect for use with Blue Magic **$9.95**

The Best Modeler's Green Putty from Squadron Products

An ideal, fast drying material for filling glue joints, dents, scratches, seams, cracks and other imperfections in plastic models. Bonds readily to styrene, sands easily, and finishes beautifully. Can also be used on wood and metal. (Shipped by UPS ground only). Set of two 2.5 oz. tubes.

#60915 Modeler's Putty . . **$5.95**

Special Chisel Removes Plastic Details You Don't Want

Upgrade your injection molded plastic models by removing the unsightly, out-of-scale details manufacturers sometimes include. Now you can eliminate handrails, rivet heads, seam lines, chrome trim, hood ornaments and other unwanted details easily. The 4 mm wide, hand ground cutting edge has slightly rounded corners so you won't gouge adjacent areas. And the no-slip handle and hefty feel give you precise control over the cutting force. Made exclusively for MicroMark of polished, surgical quality stainless steel. Ideal for use on miniature woodworking projects as well. Approx. 6-1/2" long.

#80893 Plastic Modeler's Chisel **$12.95**

Tenax - 7R...Liquid Plastic Welder Formulated for the Plastic Modeler

Welds styrene, acrylic, butyrate and ABS plastic. It uses the principle of capillary action. To apply it, simply place the parts together, then put a drop on the seam with the applicator bottle and hold for 15 seconds. In that amount of time, Tenax -7R bonds and starts to cure. This method is far superior to thicker plastic *cement* which is messy, harder to control and can damage expensive model kits. Set includes 2 oz. of Tenax-7R, a special squeeze bottle and a micro-needle with a bore of only .008". This small bore keeps the Tenax-7R inside the applicator until it is drawn out by capillary action or until you squeeze it. Bottle shape may vary.

#60683 Tenax-7R & Applicator Bottle **$7.95**

Rolykit...the Roll-Up Case that Keeps Everything in Its Place

The Rolykit is a unique storage system that keeps small items organized in the home, shop and especially during transport from place to place. When open, Rolykit lies flat so that all of the divided trays can be accessed at one time. When rolled up, the bottom of one tray seals the top of another so the contents stay put. Use the Rolykit for hardware, tools, model parts, sewing supplies, fishing gear, and more. Includes 10 trays approximately 3" x 11" and easy-carry handle. 7-1/2" x 8-1/2" x 11" when rolled up.

#81645 Rolykit **$24.95**

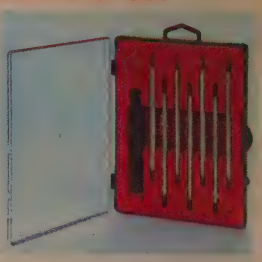
NEW! Miniature Tin Snips for Precise Control of Delicate Metal Trimming

If you've ever used large aircraft-style shears for delicate model work, you'll appreciate the enhanced control you'll get with these mini tin snips. Finely-honed cutting edges and comfort grips minimize hand fatigue. Low-profile jaws keep your cut line visible. Made of cast steel, with thrust washer-equipped pivot and lock nut. 7" long.

#82525 Miniature Tin Snips **$12.95**

NEW! Adjustable Length Precision Screwdriver Set

Chuck in handle lets you adjust double-ended hex-shank blade to any length you need from 4-3/4" to 8-1/2". Tips include nos. 00, 0 and 1 phillips; 5/64", 1/8" and 5/32" (2, 3 and 4 mm) wide flat tips; and Torx nos. 6, 7, 8, 9, 10, 15 and 20. Handle includes finger tip rotation cup for added control. Packed in handy storage box.



#82528 Precision Screwdriver Set **$14.95**

Hard Wire and Cable Cutter Cuts Cleanly... Eliminates Frayed Ends

NEW!

Sharp, hardened jaws and 15-to-1 leverage combine to produce a powerful shearing action that cleanly cuts music and spring wire up to 1/16" dia. and wire rope (control cable and picture-hanging wire) up to 3/16" diameter without frayed ends. Blackened steel handle has return spring and vinyl grips. 7-1/2" long.

#82477 Hard Wire Cutter **$12.95**

Powered Detail Engraver You Use Like a Pen!

Our powered high-speed engraving tool lets you carve and engrave the finest details in metal, wood, plastic and glass. And, because it's so light (just 1.3 ounces), you'll have more control than you ever thought possible. Only 7/16" wide at the working end x 5-1/4" long. Plugs into standard 110v AC outlet. Uses any power tool accessory with 3/32" shank...plus its quick and easy friction chuck lets you change bits in seconds. Also features a momentary or constant-on fingertip switch and an internal fan that keeps the 18,000 rpm motor running cool for hours. Use for fine detail work on duck decoys, ship models, miniature furniture and anytime a heavy rotary tool is too cumbersome to use. Also an excellent tool for engraving glass.

SPECIAL OFFER: Includes 3 steel engraving cutters for wood and plastic and 1 genuine diamond engraving burr for metal, glass and ceramic...a $12.40 value alone!

#15231 Pen Size Engraving Tool **$44.95**
#60354 Extra Diamond Engraving Burr **$7.95**

Precision Plier Set at a Bargain Price

NEW!

Fine quality two-piece set includes 6" long needle nose plier with serrated jaws that taper to less than 1/16" wide, plus a 5" long general purpose diagonal nipper with 3/8" long extra sharp cutting edges. Both pliers have spring-loaded blackened steel handles with no-play pivots and cushioned grips.

#82527 Precision Plier Set **$12.95**

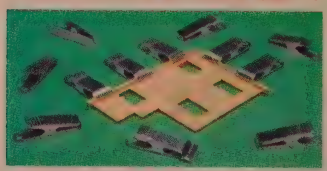
Sanding Caps Get Into Tight Corners and Can Be Changed Instantly

Now you won't have to waste time loosening screws to change sanding bands the way you do with the tube type bands. And the pointed and rounded ends smooth and shape wood, plastic and metal in the tightest places. The sanding caps are actually a molded composite with the abrasive grains attached with a super strong resin. Just press-fit the caps over the rubber drum. The slotted rubber expands slightly while the drum spins, holding the cap securely in place. To change the cap, just pull! 1/8" shank fits Dremel rotary tools and other rotary grinders. Available in two sizes, two shapes and two grits. Precision made in Germany.

	SHAPE	SIZE	QTY	PRICE
RUBBER DRUMS				
#60647	Pointed	3/16 x 7/16	1	$2.65
#60648	Pointed	3/8 x 5/8	1	$2.65
#60649	Rounded	3/16 x 7/16	1	$2.65
#60650	Rounded	3/8 x 5/8	1	$2.65
SANDING CAPS			**GRIT**	
#60651	Pointed	3/16 x 7/16	10 80	$5.75
#60652	Pointed	3/16 x 7/16	10 150	$5.75
#60653	Pointed	3/8 x 5/8	10 60	$6.75
#60654	Pointed	3/8 x 5/8	10 150	$6.75
#60655	Rounded	3/16 x 7/16	10 80	$5.75
#60656	Rounded	3/16 x 7/16	10 150	$5.75
#60657	Rounded	3/8 x 5/8	10 60	$6.75
#60658	Rounded	3/8 x 5/8	10 150	$6.75

#60659 Set of all items above (Save 17%) **$49.95**

Stainless Steel Micro-Mini Clamps Hold Where Others Can't

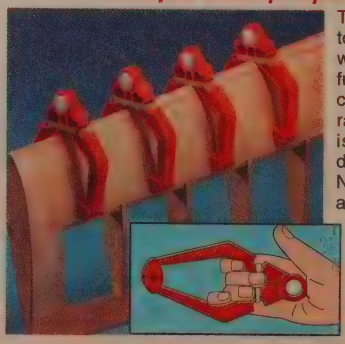


Our spring-loaded micro-mini clamps are ideal for all types of small applications. Jaws may be filed or ground to any shape. Especially good for soldering since solder won't stick.

#14532 Smooth Jaw. 1/2" wide, 5/16" capacity. Set of six **$4.95**

#14533 "Alligator" Jaw. 3/8" wide, 3/8" capacity. Set of six **$4.95**

Unique Clamp Opens With One Hand



The clever design of this clamp allows it to open quickly and easily to 5" capacity with one hand. The position of the fulcrum point also causes it to maintain constant pressure throughout the range of jaw opening. Clamping force is adjusted simply by increasing or decreasing the number of rubber bands. No-mar jaw pads rotate to hold objects at irregular angles. Ideal for assembling aircraft fuselages and wings, ship model hulls, plastic models, dollhouse furniture and many other scale objects. Polypropylene construction won't allow glue to stick.

#81312 Clamps, set of 4 . . . . . **$19.95**

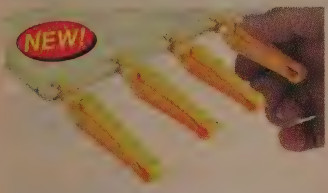
Quick-Grip™ Bar Clamp Closes and Releases with One Hand

The smooth-acting trigger lets you clamp small items with just the right amount of force. Soft rubber pressure pads protect surfaces and can be easily removed to permit access to tight spots. Reversible jaws convert the tool to a spreader in seconds. Clamping capacity: 4-1/2"; spreading capacity: 3" to 8". Beautifully made in Germany of unbreakable plastic and steel.

#81621 Micro Bar Clamp . . . . . **$12.95** . . . . . 3 or more **$10.95 ea.**

Special Spring Clamps for Model Builders Work When Others Won't

When you're working in miniature, you need clamps that have just the right amount of spring tension. Too much tension and they will distort small items...too little and they won't hold a glue joint closed. And if you've ever struggled with standard size clamps on a model project, you know your clamps must also be small and lightweight. These model builder's clamps fit the bill perfectly.

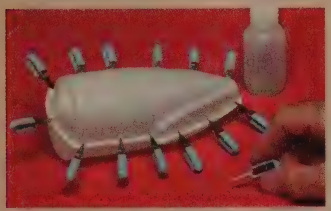


#82452 Little Yellow Clamps made of molded styrene. 3" long with 1/2" capacity. Gentle pressure, rounded jaws and lightweight construction prevents part distortion and surface marring. Particularly well suited for gluing wood trim onto models.

Set of 8 . . **$8.95** 2 or more sets **$7.95 ea.**

#60929 Aluminum clamp with steel spring. 2-1/2" long with 1/4" capacity. Jaws are designed to hold odd or irregular shapes as well as flat, smooth shapes. All metal construction makes them ideal for holding parts together while soldering. Can also be used as a heat sink.

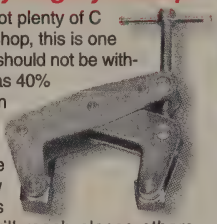
Set of 5 . . **$6.95** 2 or more sets **$5.95 ea.**



#60928 Nickel plated steel clamps with vinyl coated cushion grips. 1-3/8" long with 3/16" capacity. Ideal for holding small, flat objects and for keeping ship model rigging lines taut during assembly.

Set of 5 . . **$6.95** 2 or more sets **$5.95 ea.**

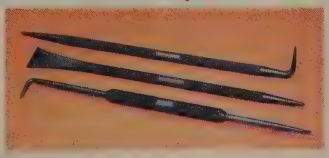
Heavy Duty Mighty Clamp



Even if you've got plenty of C clamps in your shop, this is one more you really should not be without. It actually has 40% more power than conventional C clamps its size. And because the tightening screw is at right angles to the jaw, it will reach places others can't. All steel with 4 sided swivel jaws to hold irregular shapes (one jaw face has grooves to hold round stock). 2" capacity.

#15124 Mighty Clamp **$7.95**

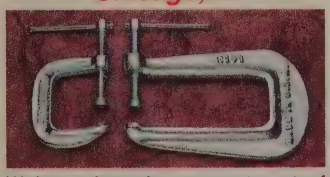
Scriber/Scraper Set for Marking and Surface Preparation



3-piece set scribes metal and plastic, scrapes off paint and stuck-on gaskets, hooks and unhooks springs in difficult locations and more. Made of steel with needle-sharp points, knurled gripping handles and black oxide finish. Each tool is 7" long.

#81496 Scriber/Scraper Set . . . **$7.95**

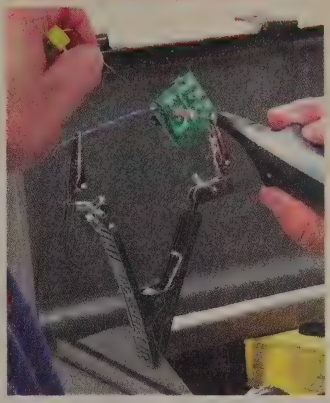
The Best Quality C Clamps...made in Chicago, IL



We've selected an assortment of C clamps in sizes best suited for model making and miniatures. They're lightweight, yet strong, with free moving screws and swivel jaws. Made entirely of zinc plated steel by the Adjustable Clamp Co., makers of the famous "Jorgensen" and "Pony" brands.

Item #	Throat	Opens	Pcs/Pkg	Price/Pkg
STANDARD THROAT				
80927	1"	1"	4	$6.60
80928	1-1/2"	1-1/2"	3	7.95
80929	1"	2"	3	6.95
80930	2-1/2"	2-1/2"	2	8.90
DEEP THROAT				
80931	3"	1"	2	8.25
80932	3-1/2"	2"	2	11.50

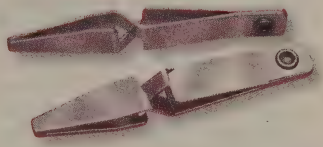
When You Need A Helping Hand



Add-A-Hand clips onto your tool box, trunk lid, work cart, flight box, etc. to provide the extra help you need when two hands aren't enough. Add-A-Hand's rust-resistant, alligator clips swivel to a convenient position to hold miniature parts, wires, eyeglasses, and fishing lures while you assemble or make repairs. You can even turn Add-A-Hand around and use it as a heavy-duty spring clamp (1-1/4" capacity).

#82464 Add-A-Hand **$9.95**

Cross-Locking Clamps for Ship Modeling and Miniature Work



Miniature spring clamps hold small objects tightly together while soldering, gluing or positioning. The weight is just right for keeping ship model rigging lines taut while glue dries. 2-1/4" long, 1/4" capacity. Smooth jaws won't leave marks. Six per package.

#60903 Cross-Locking Clamps (6) . . **$6.95**

Fast, Easy, Cam Action Bar Clamps

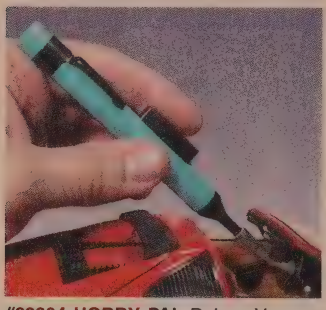
These are the fastest, easiest sure-grip modeler's clamps ever made and they're available only from Micro-Mark. To use, just slide the moveable jaw along the bar until it touches your workpiece. Then flip the cam-action lever. Clamp holds securely with no rubber bands to break or plastic wedges to lose. Rubber lined jaws won't slip on round or smooth stock. 7" capacity. Sold in a set of 2.

#15125 Cam Action Bar Clamps (2) **$9.95**
2 or more sets **$8.95 ea.**

Vacuum Pick Up Tools for Hard-To-Hold Parts

These unique tools use vacuum to pick up and position small model parts. Ideal for hard-to-handle items with glue applied around the edges or bottom surface. Use to install decals, window panes, access panels, miniature hardware and other parts which cannot be held with fingers, pliers or tweezers.

#81851 MODEL PAL Standard Vacuum Tool. A gentle squeeze of the bulb picks up the item and a second squeeze releases it. Includes three rubber suction tips (1/8", 1/4", and 3/8" diameter). 3-1/2" long **$7.95**



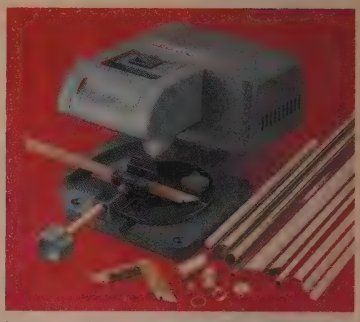
#82304 HOBBY PAL Deluxe Vacuum Tool. Includes two rotatable extension tips (straight and angled) and a 6" long handle for accurate placement of parts in hard-to-reach locations. Held like a pen. Press the button to create the suction needed for pick up, then press it again to release the item. Includes four rubber suction tips (1/8", 1/4", 3/8" and 1/2" diameter) plus convenient pocket clip. *Color may vary* **$14.95**

Miniature Brushes Get into the Tightest Corners

These unusual brushes are excellent for removing rust and dirt from the smallest parts and for scratching metal and glossy plastic for better solder and glue adhesion. Bristles feed out like a mechanical pencil.

#14258 Brass Bristle Brush **$8.95**
#14259 Fiberglass Bristle Brush. . **$8.95**
#14342 Two Piece Set, one each of above. **$16.95**
#14343 Brass Refills, 2/pkg. . . . **$2.95**
#14344 Fiberglass Refills, 2/pkg. . **$2.95**
#81850 Ultra Micro Fiberglass Brush **$6.95**
#82027 Ultra Micro Fiberglass Refills, 12/pkg. **$6.95**

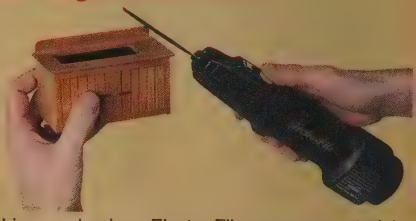
Powered Miter/Cut-Off Saw for Wood, Metal and Plastic



Our incredible Miter/Cut-Off saw cuts steel, brass, aluminum, wood and just about everything else like nothing you've ever seen before. Now you can make perfect cuts in 1/10th the time it takes to cut by hand...and the cuts are so smooth and accurate you may never have to file or sand cut ends again! Cuts rods, tubing, squares, miniature molding, brass and plastic shapes. Has a built-in vise that adjusts for cuts from 45° to 90°. 2" diameter blade cuts material 3/8" thick x 3/4" wide x any length at 90° and 1/2" wide at 45°. 110v AC, 8,000 rpm motor is encased in a high impact plastic housing. Base and vise are cast aluminum. Includes three abrasive cut-off wheels for metal and one fine-cut high speed steel saw blade for wood and plastic. Made in Japan.

#15218 Miter/Cut-Off Machine . . . . . List $189.95 . . . . . Our Price **$139.95**
#15219 Replacement Cut-Off Wheels (3) **$7.95**
#15220 Replacement Saw Blade. **$17.95**

Electro-File Shapes, Smooths and Finishes Large Model Parts



Larger models require larger parts, and larger parts require larger tools. Electro-File's large motor and long 1/4" stroke make it easy to saw, file, shape and sand wood, plastic and resin parts used in large-scale models and dollhouse miniatures. With its fast, reciprocating action of 2400 strokes per minute and internally-balanced drive mechanism, Electro-File removes material quickly, but smoothly. Complete set includes power unit with lockable push-button switch, battery charger with 2 detachable battery packs (cordless model only), 110v AC wall transformer, 2 saw blades, 10 piece needle file set, 3/8" x 1-3/4" sanding paddle with 20 self-stick sanding strips, collet wrench, hang-up hook, and instructions.

#82338 Cordless Electro-File Set
List $139.95 . . . . . Our Price **$119.95**

#82339 110v AC Corded Electro-File.
List $129.95 . . . . . Our Price **$109.95**

Electro-File Accessories

#82340 Extra Battery Pack, 3.6v DC Ni-Cad . . **$15.50**
#82341 220 grit Sanding Strips (50) **$9.95**
#82342 120 grit Sanding Strips (50) **$9.95**
#82343 80 grit Sanding Strips (50) **$9.95**
#82344 40 teeth/inch Fine Saw Blade . . . **$6.95**
#82345 15 teeth/inch Coarse Saw Blade . . **$6.95**
#33110 6-piece Rasp Set **$13.95**

Jeweler's Micro-Vise for Hard-to-Hold Round Items

This micro-vise is perfect for holding small round items while drilling, filing, grinding or performing other operations. Four double-sided surfaces provide 8 gripping edges specially formed to hold diameters from 1/2" to 1-1/2". The knurled thumb screw applies just the right amount of gripping force necessary to hold objects securely without damaging them. Made of plated brass.

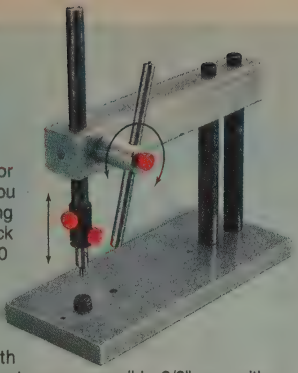
#81495 Micro-Vise **$9.95**

Mini Vise Holds Odd Shaped Parts Delicately, Yet Securely

This mini vise is ideal for holding small, odd-shaped parts while drilling, filing, painting, carving, sanding, grinding, etc. Non-mar plastic pins mounted in holes on the top of vise jaws can be placed in 12 different locations to conform to the shape of your part. Or remove pins and use as a conventional vise. Hold vise in your hand, in another vise, or place on drill press table for drilling. Smooth faced aluminum jaws are 1-3/4" wide x 1/2" deep and open to 3/4". Features steel guide pins and knurled tightening screw.

#80769 Mini Vise **$11.95**

The Sensi-Press... A Precision Arbor Press for Delicate Work



The Sensi-Press is a sensitive arbor punch press small enough to give you that delicate touch needed for working with fine model, instrument and clock parts, yet sturdy enough to apply 250 lbs. of force. Use for press fitting small parts together and for removing gears and wheels from axles. Can also be used as a hole punch and nibbler when used with optional punch tooling sold below. Features a reversible 3/8" ram with a 3/16" counterbore on one end to accept interchangeable tooling. Package includes completely assembled press with 3/32" press tip, die bore plug, ram thumb screw, Allen wrench, adjustable nylon gib and instructions. Constructed of steel and aluminum alloy. Base is 7" x 3". Throat depth is 4-1/4". A fine tool well made in the USA. (Photo shows Sensi-Press with optional punch adapter, 1/8" punch and 1/8" die installed).

#60627 Sensi-Press . . . . . List $79.95 . . . . . Our Price **$74.95**

#82584 Sensi-Press 9 piece tooling set. Includes 1/16" tip; cone tip; blank tip; oversize 1/2" O.D. tip; center punch tip; 2mm, 3/32" and 1/8" bored tips, plus center/universal punch. **$12.95**

#60629 Sensi-Press V plate. For supporting wheels and gears during axle removal. **$3.50**

SENSI-PRESS HOLE PUNCH TOOLING

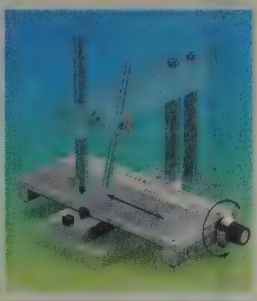
(Maximum thickness for all hole punching is .020" half-hard brass or equivalent).

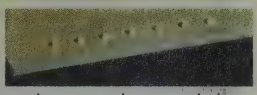
#60630 Punch Adapter (Required to hold all punches) . . . $3.50

ROUND PUNCHES AND DIES

#60631	1/16" Punch	**$5.95**	**#60635**	3/32" Punch	**$5.95**
#60632	1/16" Die	**$5.95**	**#60636**	3/32" Die	**$5.95**
#60633	5/64" Punch	**$5.95**	**#60637**	1/8" Punch	**$5.95**
#60634	5/64" Die	**$5.95**	**#60638**	1/8" Die	**$5.95**

The Riveter...The Best Way to Produce Simulated Rivets on Your Model





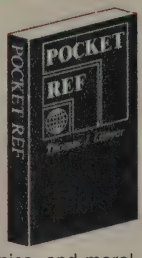
The Riveter is a precision advancing table that attaches to the base of the Sensi-Press. It has a knob that moves the table left and right. The knob is calibrated in .001" increments to provide you with extremely accurate spacing. When used with the punch and die rivet tooling sold below, you can emboss evenly spaced simulated "rivets" in the surface of your workpiece (that you attach to the table with tape). Works well on light brass, aluminum and styrene sheet stock. We know of nothing else that will produce more realistic-looking rivet details. Can also be used with the MicroLux drill press for drilling perfectly spaced in-line holes (2 holes must be drilled in drill press base to mount the Riveter). Includes .015" diameter rivet tooling.

(Note: the Riveter does not install miniature rivets or eyelets. It simulates rivets by embossing dimples in the surface).

#60643 The Riveter . . . . . List $49.95
Our Price **$44.95**

#60644 Rivet forming set. Includes cone tip plus .010", .020", .030", .040" and .050" rivet diameter punches and dies. **$34.95**

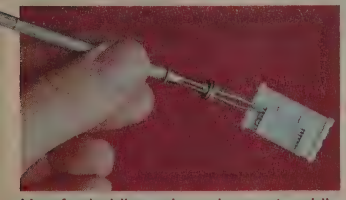
Shirt-Pocket Technical Manual is Small in Size, but Big in Information



This is one of the most valuable reference books we've ever found: 544 pages loaded with tables, maps, formulas and conversion tables, plus specifications for hardware, glue, materials, carpentry, wiring, plumbing, motors, tools, electronics, and more! Perfect bound; 3-1/4" x 5-1/2".

#82056 Pocket Ref **$9.95**

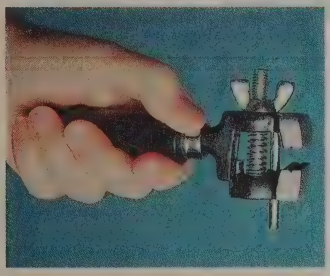
Holding Tool for Micro Size Parts



Use for holding micro size parts while painting, gluing or positioning. Tweezer type jaws grip tightly with one hand by sliding knurled ring towards tip. Holds objects up to 1/8" thick. Made of stainless steel. 4-1/4" long.

#80770 Holding Tool **$5.50**

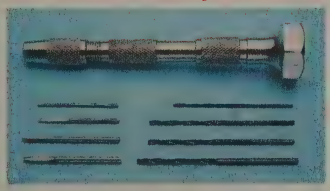
Hand Vise Holds When You Can't



Use to hold small objects tight while grinding, drilling, filing, hammering, sanding, shaping, etc. Jaws have vertical and horizontal V grooves for holding round objects. Jaws are 1" wide and open to 5/8". 6" long overall. All steel with wood handle. Use a hand vise and save your fingers.

#60937 Hand Vise **$10.95**

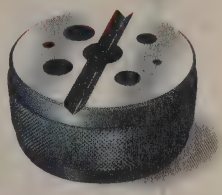
Drill and Tap Set



Set includes tungsten steel taps, 00-90, 0-80, 1-72 and 2-56; corresponding high speed steel tap drills, nos. 61, 55, 53 and 50; and swivel head tap holder.

#60316 Drill and Tap Set **$19.95**

Toolmaker's Bench Block is Ideal for Model Work



A nicely made tool machined from a solid block of tool steel. The smooth surface supports your work and the nine holes from 1/8" to 5/8" allow clearance for cutting tools and punches. Use for drilling, tapping, reaming, pin punching and more. Has a V groove across the top surface for holding round and odd shaped stock. 3" dia. x 1-3/8" high.

#80924 Toolmaker's Block List $24.95
Our Price **$16.95**

14-Piece Micro-Size Tap and Die Set

14-pc. Tap and Die set includes tungsten steel taps and 13/16" OD adjustable dies in the following sizes: 0-80, 1-72, 2-56, 3-48, 4-40 and 6-32, plus die stock, tap handle and plastic storage box.

#14153 Tap and Die Set
List $89.95 . . . . . Our Price **$69.95**

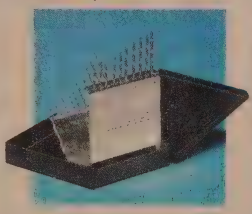
The Rogers Drill Bit Set ...Preferred by Experienced Modelers

The ultra-sharp high-speed steel drill bits, easy-to-read markings and convenient arrangement makes this set very popular with experienced modelers. Includes twenty bits (nos. 61 thru 80), drill stand and clear plastic dome for safe storage.

#82416 Rogers Drill Bit Set
List $29.95 . . . . . Our Price **$24.95**

Micro-Size Drill Bits in Sets or Six Packs

Our drill bits are top quality high speed steel for use on wood, plastic and metal and will stay sharp far longer than ordinary carbon bits. Sets include 20 bits from. #61 (.039") to #80 (.0135"). Six packs include six of the same size in an envelope.



#26104 Micro drill bit set in a folding steel index with embossed I.D. for each bit.

List $24.95. . . . . .Our Price **$18.50**

#60362 Micro drill bit set in a plastic index with sliding window. Keeps bits securely in place and dispenses only one at a time. Prevents mix-up and loss of bits even if dropped. To use, simply slide opening in cover to numbered slot of bit you need.

List $24.95. . . . . .Our Price **$18.50**

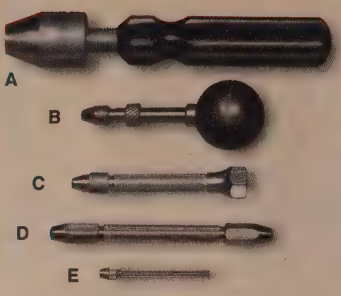
SIX PACKS - $6.95 EACH

#15167	#61 (.039")	**#15174**	#68 (.031")
#15168	#62 (.038")	**#15175**	#69 (.0292")
#15169	#63 (.037")	**#15176**	#70 (.028")
#15170	#64 (.036")	**#15177**	#71 (.026")
#15171	#65 (.035")	**#15178**	#72 (.025")
#15172	#66 (.033")	**#15179**	#73 (.024")
#15173	#67 (.032")	**#15180**	#74 (.0225")

SIX PACKS - $7.95 EACH

#15181	#75 (.021")	**#15184**	#78 (.016")
#15182	#76 (.020")	**#15185**	#79 (.0145")
#15183	#77 (.018")	**#15186**	#80 (.0135")

Pin Vises Hold a Variety of Items



Use pin vises for holding drill bits, reamers, needle files, screws, taps, wires...even pins.

A. #21106 Heavy Duty Pin Vise for holding larger size drill bits, files, taps, etc. Plastic handle with keyless Jacobs type chuck. #72 (.025") to 1/4" capacity. 6" long overall. **$7.95**

B. #80743 Ball Head Pin Vise. Large freewheeling 1-1/4" dia. plastic head fits comfortably in your palm. Nickel-plated steel with four collets. 0" to 1/8" capacity. 3-1/2" long overall. **$7.95**

C. #21105 Swivel Head Pin Vise with freewheeling head is especially suited for drilling and tapping. Nickel plated steel with two double ended collets. 0" to 1/8" capacity. 3-1/2" long overall. . **$6.50**

D. #21104 Double End Pin Vise with reversible steel collets in each end. Hex head prevents rolling on bench. 0" to 1/8" capacity. Nickel plated brass. 4-1/8" long overall. **$6.50**

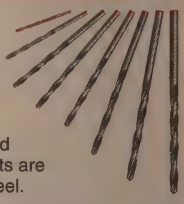
E. #15116 High Precision Micro Pin Vise. An exceptionally well made tool from Switzerland. Holds micro-size drill bits up to no. 61(.039"). Can be used by hand or locked in a drill press. Made of nickel plated solid brass. 2" long overall **$5.95**

Deluxe Pin Vise

We've combined the comfort and ease of use of our Ball End Pin Vise with the convenience of our Universal Chuck to provide you with a tool that's sure to become one of your favorites. Holds drills and taps with shank diameters of 1/64" to 1/8" diameter. Includes four collets. 4-3/4" long overall.

#82110 Deluxe Pin Vise
$20.90 if purchased separately. . **$17.75**

Hard to Find Drill Bit Sets



Probably the most used sizes for miniature work, but try to find them when you need them. Both sets are high speed steel.

#14143 8-piece inch set includes one each 1/64", 1/32", 3/64", 1/16", 5/64", 3/32", 7/64" and 1/8". **$7.95**

#60437 10-piece metric set includes one each .5mm to 5mm, in .5mm increments **$9.95**

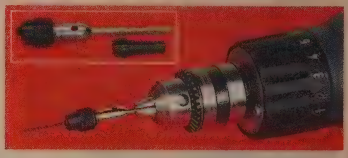
"...your service was astoundingly fast and courteous"

Bruce F.
email

Adapter Chuck for Electric Drills

Most full-size power drill chucks just won't close far enough to handle miniature size drill bits. Lock this adapter in your oversize chuck and you've quickly converted it for precise drilling. Includes two collets. 0-3/32" capacity.

#26107 Adapter Chuck **$8.95**



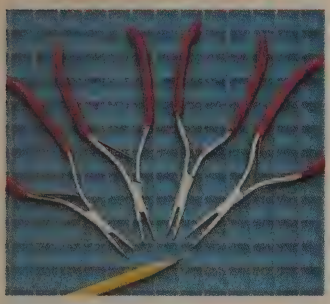
Tungsten Carbide Cutters Last Almost Forever

You've never seen anything like these incredible cutters. They're made of virtually indestructible tungsten carbide welded to steel shanks. They'll last for years and they won't load up, break down or overheat like ordinary steel cutters. Use on all woods, fiberglass, stone, ceramic or plastic (not recommended for use on metal). 1/8" shanks fit in hand drills, Dremel, Sears and MicroLux rotary tools and drill presses.

	ITEM #	HEAD SIZE	GRIT	PRICE
A.	14450	1/2" x 1/2"	Coarse	$7.95
	14451	1/2" x 1/2"	Fine	7.95
B.	14452	5/16" Dia.	Coarse	7.95
	14453	5/16" Dia.	Fine	7.95
C.	14454	1/2" Dia.	Coarse	7.95
	14455	1/2" Dia.	Fine	7.95
D.	14456	5/8" Dia.	Coarse	7.95
	14457	5/8" Dia.	Fine	7.95
E.	14458	1/4" x 1/2"	Coarse	7.95
	14459	1/4" x 1/2"	Fine	7.95
F.	14460	1/8" x 3/4"	Coarse	7.95
	14461	1/8" x 3/4"	Fine	7.95

#60919 Set of 6, Fine **$45.95**
#60920 Set of 6, Coarse **$45.95**

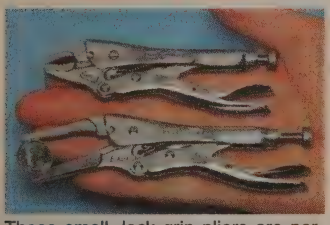
Surgeon's Stainless Steel Micro Pliers



An extremely fine set of pliers for bending, grasping and positioning of delicate miniature components. Jaws are only 1/8" thick x 1/4" wide at their widest point, allowing you to work in confined areas...and each plier weighs just one ounce. Made of never-rust surgical quality stainless steel with box-joint construction for a lifetime of use. Smooth jaws (not serrated) won't mar easily scratched brass and other soft metals. Specially shaped vinyl coated handles are extremely comfortable to use. Set includes flat nose, bent nose, needle nose and narrow nose. All pliers are approximately 5" long.

#60399 Micro Plier Set . . . . List $39.95
Our Price **$29.95**

Locking Pliers Now in Miniature Sizes

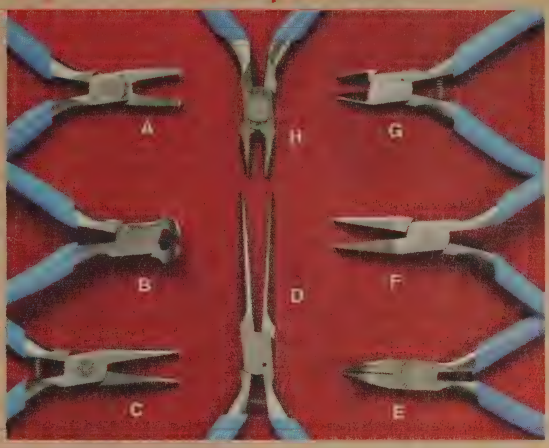


These small, lock grip pliers are perfect for all types of miniature work. They're fully adjustable and hold fragile items securely without crushing and the long nose pliers will get into tight spots like no other lock jaw pliers can.

#14565 Curved jaw with wire cutter, 4-1/2" long. 1" capacity **$14.95**

#14564 Long nose with wire cutter, 5-1/2" long. 1-1/2" capacity . . . **$16.95**

CHANNEL LOCK Pliers Known World Wide for Quality and Value



The quality of Channel Lock reflects a tradition of excellence maintained for over a century. All pliers are manufactured in the USA using premium, high carbon American steel. Industrial lap joint construction assures perfect jaw alignment and precise, wobble free movement of jaw pivot. All have polished heads, smooth, non-serrated jaw faces and vinyl coated handles. Sizes indicated below are approximate.

A. #81268 Micro Nipper. For cutting in confined spaces. Jaw width: 1/4". Length: 4-3/4". . . . . Retail $20.95 . . . . . Our Price **$16.95**

B. #81269 End Nipper. For cutting wire, strip stock, dollhouse bricks, etc. Jaw width: 1/2". Length: 4" . . . . . Retail $25.95 . . . . . Our Price **$20.95**

C. #81270 Needle Nose. Half round jaws taper to 3/64". Spring return. Length: 4-3/4" . . . . . Retail $23.95 . . . . . .Our Price **$18.95**

D. #81271 Extra Long Needle Nose. For reaching into confined spaces. Half round jaws taper to 1/16". Spring return. Length: 5-3/4". Retail $25.95 . . Our Price **$20.95**

E. #81272 Curved Needle Nose. Nose is bent approx. 60°. Half round jaws taper to 3/64" . Length: 4-1/2". . . . . Retail $20.95 . . . . . Our Price **$16.95**

F. #81273 Flat Nose. Jaw width: 1/4". Length: 4-3/4". Tips taper to 3/64". Retail $18.95 . . . . . Our Price **$15.95**

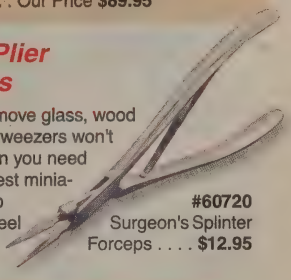
G. #81274 Diagonal Flush Cutter. Very sharp for cutting soft wire and plastic. Spring return. Length: 4-1/4". . . . . Retail $26.95 . . . . . Our Price **$22.95**

H. #81275 Round Nose. For making small loops, eyes, rings etc. in soft wire. Jaws taper to 3/64". Length: 4-1/2" . . . . . Retail $18.95 . . . . . Our Price **$15.95**

BEST BUY! SET OF FIVE

#81276 Includes #81269, 81270, 81273, 81274 and 81275.
Retail $114.75 . . . . . Our Price **$89.95**

Ultrafine Needle Point Plier Works Like Tweezers



This beautifully made tool is used by surgeons to remove glass, wood and metal splinters from accident victims and when tweezers won't give them a strong enough grip. You'll use them when you need an extra fine needle nose plier for gripping the smallest miniature items and for making tiny bends in wire and strip metal. Made of polished, surgical quality stainless steel with box joints and spring return. 6" long overall.

#60720
Surgeon's Splinter
Forceps **$12.95**

Stainless Steel Box Joint Wire Loop Pliers

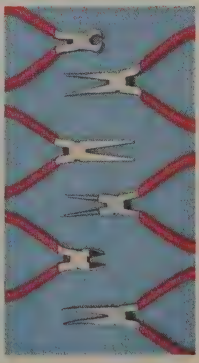
Beautifully made, highly polished pliers make perfect loops, rings and tight radius bends in wire and strip material. An excellent tool for jewelry and ship model work. One jaw has stepped tip for three different radius bends. The other jaw has a matching curved recess, making pliers work like a male/female bending die.

#14483 Approximately 3/64", 3/32" and 1/8" radius bends. 6" long overall **$10.95**

#14484 Approximately 1/32", 3/64" and 1/16" radius bends. 5-1/2" long overall **$10.95**

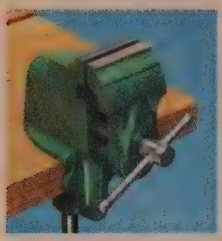
#50295 Best Buy! Save $2.95 Set of Both Pliers **$18.95**

A Great Miniature Plier Value



Because we purchase in large quantities, we convinced the manufacturer to make a set of miniature pliers exclusively for us in the price/quality/style combination we know our customers want. All pliers are made of drop forged, high carbon steel with vinyl covered handles and spring return. Six piece set includes: end nipper, needle nose, flat nose, round nose, diagonal cutter and bent nose. Pliers range from 4" to 5-1/4" long. Needle and bent nose pliers have serrated jaws for better grip.

#80974 6-pc. Plier Set . . . . . Retail $29.95
Our Price **$24.95**

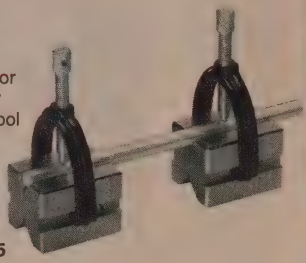


Well-Made Miniature Machinist's Vise at an Economical Price

Our clamp-on miniature machinist's vise holds all types of small components securely. Smooth jaws won't mar your work the way serrated-jaw vises can. Made of cast iron with machined jaw faces and twin guide rods to keep jaws parallel. Includes a handy anvil surface for hammering. Clamps to benches up to 1" thick. Jaws are 1-1/2" wide with 1-1/2" capacity.

#60297 Machinist's Vise **$16.95**

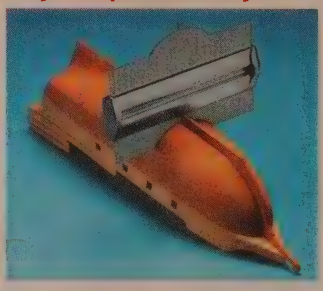
Precision Ground V Blocks Hold Round Stock Securely



V blocks are the best way to hold round tubing or bar stock for milling, cutting, grinding, drilling or filing. Ours are made of fine quality hardened tool steel, precision milled and polished on all 6 sides. And all sides are perfectly square with each other. Holds stock up to 1" dia. Blocks are approx. 1-1/4" square x 1-5/8" long.

#14255 Perfectly Matched Set of Two V Blocks/Two Clamps **$27.95**

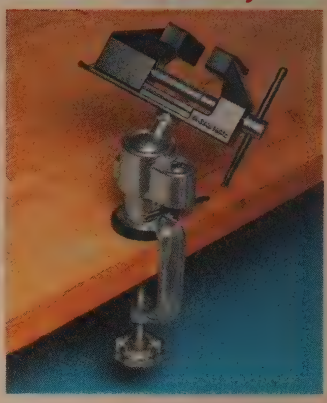
Contour Gauge Copies Any Shape Instantly



Now you can copy and measure any irregular shape by pressing gauge against the contour to be copied. When removed, a perfect pattern has been produced for cutting, matching or checking dimensions. Ideal for fitting floor tiles and carpet around molding and pipes. Also used for checking wood parts against drawings. 6" long with 175 tempered steel wires. Includes splice plate that can join two gauges together, creating a 12" gauge.

#14412 Contour Gauge **$7.95**
2 or more **$6.95 ea.**

A Good Quality All-Position Vise for Less Money

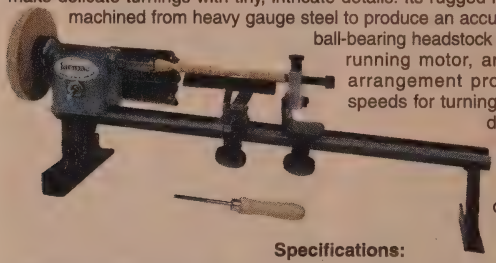


If you're not ready for the precision, quality and expense of the Panavise, then this vise is a good second choice. The head rotates 360° and also tilts from 0 to 90°, letting you position your work at the most accessible angle. All movements are locked by a single lever. The vise clamps to the edge of your workbench (up to 2-1/8" thick) for portability. Made of die-cast aluminum and nickel-plated steel. Jaws are 3" wide, open to 2" and feature slide-off rubber pads. Overall height above workbench is 6-1/4" (in vertical position). A great value compared to other all-position vises.

#81314 All-position Vise **$24.95**

Jarmac Miniature Woodturner's Lathe

Designed specifically for miniature work, the Jarmac Woodturner's Lathe lets you make delicate turnings with tiny, intricate details. Its rugged metal components are machined from heavy gauge steel to produce an accurate, durable tool. The ball-bearing headstock is driven by a smooth-running motor, and a two-step pulley arrangement provides high and low speeds for turning both small and large diameter stock. Starter package includes lathe, 4-prong spur driver, cup/point center, 3-1/2" tool rest and 1/4" gouge turning chisel.



Specifications:

- Distance between centers: up to 12"
- Headstock spindle thread: 3/8"-24 male
- Overall size: 20" long x 9" deep x 8" high
- Spindle speed: 2300/850 rpm
- Swing over bed: 4" diameter
- Motor horsepower: 1/16
- Tailstock thread: 3/8" -24 female
- Weight: 8.5 lbs.

#82060 Jarmac Woodturner's Lathe . . . . . List $259.95 . . . . . Our Price **$199.95**

Lathe Accessories

A. #82061 Ball Bearing center . . **$23.50**
B. #82062 1/4" Cup Center **$7.25**
C. #82063 Cup/Point Center **$7.25**
D. #82064 Point Center **$6.50**
E. #82065 Spur Driver **$14.50**
F. #82066 Screw Driver **$13.95**
G. #82068 1/4" Drill Chuck with key **$13.95**
H. #82069 3/8" Drill Chuck with key **$25.95**
J. #82067 3" diameter Face Plate **$25.50**
K. #82070 1-1/2" Tool Rest **$6.50**
L. #82071 3-1/2" Tool Rest **$7.50**

Not Shown:
#82075 Spare Drive Belt. **$6.50**

Micro Turning Tool Set for Precision Lathe Work

Our professional quality turning tool set is made of the finest quality tool steel, carefully ground and polished with nicely turned and lacquered hardwood handles. Excellent for jewelry work, dollhouse miniatures, wooden toys, military models, railroad models and furniture finials...in fact, anytime you need miniature size lathe turnings in soft metals, wood or plastic. Many shapes can also be used for carving or engraving.

#20125 Micro Lathe Tool Set
List $79.95 . . . . . Our Price **$59.95**

Turning Chisel Set

Includes 1/8" gouge, parting tool, skew and straight cut. Wood handles. Approx. 6" long overall.

#60922 4-Piece Turning Set . . . **$28.95**

Stainless Steel Mini Tweezer Set

A nicely made, never-rust set that's about 40% smaller than other sets we sell, making them ideal for handling micro size items. Includes self locking, needle point, angle point and flat smooth point. The flat point is good for applying decals and other items that could be marred by sharp points. All tweezers are approximately 4-1/2" long.

#60699 Mini Tweezer Set . . List $12.95
Our Price **$8.50**

Stainless Steel Tweezer Set

These stainless steel tweezers are made exclusively for Micro-Mark by a manufacturer of surgical quality instruments. Beautifully polished, all purpose set lets you grasp, position & manipulate the smallest of items. Made of stainless steel, gives you a lifetime of service. Set contains 4-1/2" sharp point, 4-3/4" flat point, 6" blunt point, 6" bent sharp point, 6-1/2" cross locking tweezers.

#60365 5 Piece SS Tweezer Set
List $19.95 . . . . . .Our Price **$14.95**

No Glare, Mat-Black Tweezers Won't Reflect Light

These tweezers make it a lot easier to work with ultra-small items under bright light. The mat-black finish won't reflect light back into your eyes. Set of four. Top two tweezers pictured are approx. 4" long; bottom two are approx. 5" long.

#15149 Mat Black Tweezer Set . . **$12.95**

Plastic Modeler's Micro Holding Tool

A unique tool for holding micro size plastic parts for painting. Cross-cut chuck will hold flat or round parts up to 3/64" thick. Chuck can be opened and closed with one hand by sliding knurled ring up and down. 4" long overall. 0" to 3/64" capacity. Can also be used for holding micro size drill bits and other small metal parts.

#14566 Micro Holding Tool. **$5.50**

NEW!

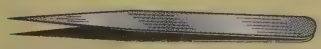
Pearl Tweezers Prevent "Fly-Away" Parts

Holding and positioning miniscule ball bearings, miniature hardware and tiny detail parts with standard tweezers can be a frustrating experience...parts often slip out of the tips and fly into space — never to be seen again! To solve this problem, we created a special tool that's similar to a tweezer used by jewelers to hold pearls. Spherical indentations in the tips of our tweezer securely grip round or irregularly contoured objects so you can easily place them in the exact position you need. Made of satin-finish stainless steel. Approx. 4-1/2" long.

#82426 Pearl Tweezer. **$8.95**

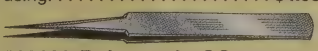
Professional Quality Tweezers You Won't Find at the Local Hardware Store

These tweezers are the finest quality you'll find anywhere. Most come from manufacturers for the jewelry, dental and watchmaking trades.

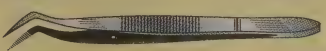


#19101 Swiss style watchmaker's tweezer. Stainless steel. Fine, smooth points. 4-5/8" long. **$4.95**

#19102 Swiss style watchmaker's tweezer. Stainless steel. Smooth points. 4-5/8" long. Bend lets you rest your hand on a workbench while using. **$4.95**



#19103 Boley style GG tweezer. Stainless steel. Hollow, very light spring tension. Smooth points. 4-3/4" long. **$4.95**

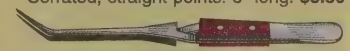


#19105 Double bend dental tweezer. Stainless steel. Fine serrated points. 6" long **$5.50**

#19106 Slide lock soldering tweezer. Stainless steel. Medium sharp points. 4-3/4" long **$4.95**

#19109 Cross locking, self-closing tweezer. Nickel plated steel. Serrated points. 6-1/2" long **$6.95**

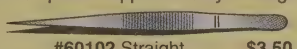
#60904 Cross locking, self-closing, heat resistant grips. Stainless steel. Serrated, straight points. 6" long. **$5.50**



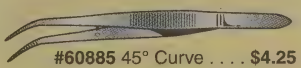
#19110 Cross locking, self-closing, heat resistant grips. Stainless steel. Serrated points. 6" long. **$5.50**

#60907 Flat, smooth decal/stamp tweezer. Stainless steel. 4-1/2" l. **$3.50**

Micro Tweezers. Stainless steel. Fine serrated points. Approximately 4" long.



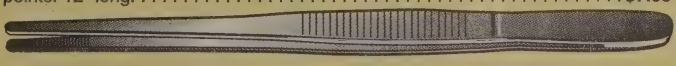
#60102 Straight **$3.50**



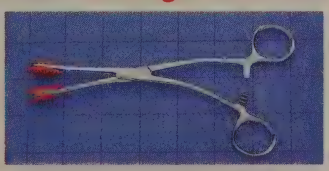
#60885 45° Curve **$4.25**

#60886 90° Curve **$4.25**

#81010 (Below) Giant long reach tweezer. Stainless steel. Serrated rounded points. 12" long. **$7.95**



Surgeon's Soft-Jaw Seizing Tool



Soft rubber jaws grip fragile or easily marred items securely. Use for positioning small items in hard-to-reach places on your model railroad layout, dollhouse or diorama. Grips tighter than your fingers and won't leave fingerprints. Holds items up to 1" thick. Stainless steel, box-joint construction, 7" long. Jaws are 1/2" wide.

#60739 Surgeon's Seizing Tool . . **$10.95**

Mini Model Builders Clamps

Lightweight plastic clamps with 1 fixed jaw and 1 adjustable jaw. To use, slide adjustable jaw up to work piece and press tapered locking wedge to hold. Available in 2 sizes. Sold in a set of 2 clamps.

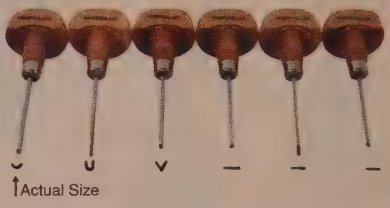
#60930 3" capacity (2) **$2.95**
#80323 7" capacity (2). **$5.95**
#80383 Set of 4 - 2 ea., 3" & 7" . . **$7.95**

The Finest Micro Size Carving Tools You'll Find Anywhere

Our micro carving tools are made of the finest quality tool steel, fully sharpened and honed to an incredibly sharp edge. You'll be amazed at the intricate cuts possible. These tools are a must if you're into anything that requires small, intricate cuts in wood...decoy carving, ship modeling, dollhouse miniatures, etc. Both sets have lacquered hardwood handles and include one single bevel chisel edge, one double bevel chisel edge, one skew chisel edge, two gouges and one parting tool (V shape). Storage box included.

↑Actual Size

#25105 Micro Set (3mm). 4-1/4" long . . **$38.95**



↑Actual Size

#50275 Ultra Micro set (2mm). 4" long . . **$47.95**

#50276 Best Buy! Both sets - **SAVE 15%** **$73.85**

Reducing "Punches" Repair Oversize Holes

It happens to the best of us...the hole we drilled is just a little too big for its mating part. Fortunately, our Reducing Punch Set makes the repair easy: Just place the ball end over the hole and tap with a hammer. The punch deforms the edge of the hole to reduce its diameter. Use for pressing flywheels onto motor shafts, mounting dowel pins in fixtures, reducing excessive play in linkages, etc. Also creates "dome-type" features in metal sheet. Set of three hardened steel punches (1/2", 5/8" and 3/4" dia.) accommodates hole sizes from 1/16" thru 5/8" dia. 1/4" diameter steel handles. 4" long.

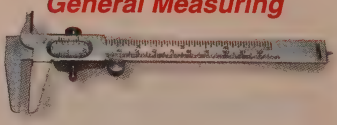
#82390 Reducing Punch Set . . **$19.95**

Micro Drill for Delicate Hand Drilling

Our micro-drill is the pin vise with a difference. Knurled ring slides up and down the spiral brass handle, causing the drill bit to turn. Drill holes in wood, plastic and thin brass in half the time as an ordinary pin vise. Swivel head lets you exert downward pressure while drilling. Steel chuck holds bits from no. 61 thru 80. A nicely made tool that's a worthwhile addition to any modeler's or miniaturist's workshop. 4" long overall.

#60348 Micro Hand Drill **$7.95**

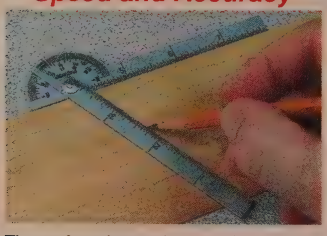
Economical Vernier Caliper for General Measuring



Close measurements are easy with our versatile, economical Vernier Caliper. Features inside/outside jaws, depth gauge, easy adjust friction roller and lock nut. Calibrated in inches (0"-5") and centimeters. Made of satin finished steel.

#10111 Vernier Caliper **$9.95**

Mark and Measure Any Angle with Speed and Accuracy

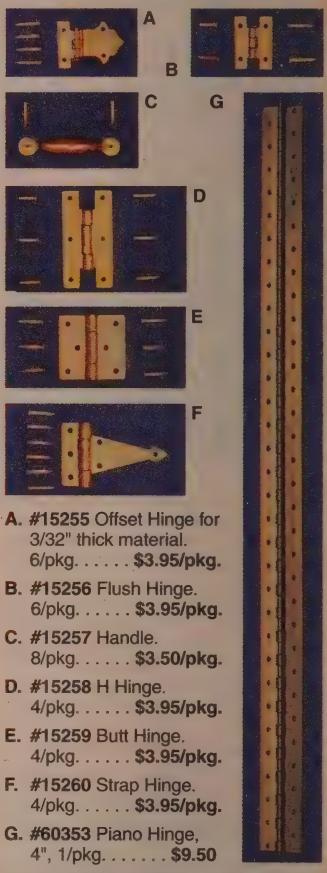


The perfect size angle setter for all types of miniature construction projects. Use to measure and mark angles or to transfer an angle from a drawing to the wood, metal or plastic part you're working on. Excellent for use on dollhouses and scale models. Beautifully made of stainless steel with engraved and blackened hairline markings. Doubles as an 8" rule when extended. 5" long when folded.

#60299 Angle Setter/Protractor . . **$10.95**

Solid Brass Miniature Hardware

Use our miniature hardware for dollhouse doors and furniture, model railroad structures, ship models, architectural models and more. Fasten with miniature nails included or with glue. Items shown approx. actual size.



A. #15255 Offset Hinge for 3/32" thick material. 6/pkg. . . . . **$3.95/pkg.**

B. #15256 Flush Hinge. 6/pkg. . . . . **$3.95/pkg.**

C. #15257 Handle. 8/pkg. . . . . **$3.50/pkg.**

D. #15258 H Hinge. 4/pkg. . . . . **$3.95/pkg.**

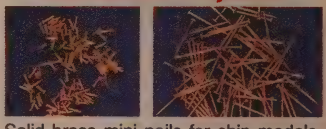
E. #15259 Butt Hinge. 4/pkg. . . . . **$3.95/pkg.**

F. #15260 Strap Hinge. 4/pkg. . . . . **$3.95/pkg.**

G. #60353 Piano Hinge, 4", 1/pkg. **$9.50**

(Nails not included with #60353 - order #14315 below)

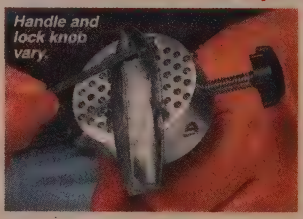
Miniature Nails for Miniature Projects



Solid brass mini nails for ship models, dollhouse miniatures, model railroads and miniature craft projects. Approx. 100 pcs. per package.

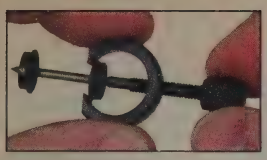
#14315 3/32" long x .020" dia. . . **$2.95**
#14316 3/8" long x .026" dia. . . . **$2.95**
#14317 1/4" long x .035" dia. . . . **$3.25**
#81844 3/8" long x .020" dia. . . . **$3.50**

Universal Clamp Holds the Oddest Shapes



This ingenious tool is used to hold small and odd-shaped parts for engraving, carving, sawing, filing, sharpening, etc. The four steel pins adjust to 60 different positions to hold the most irregular shapes. 2"dia. solid aluminum head with steel guide pins and screw. Handle can be removed for locking the head in a bench vise. 6" long overall.

#21129 Universal Clamp . . . . . List $34.95 . . . . . Our Price **$27.95**



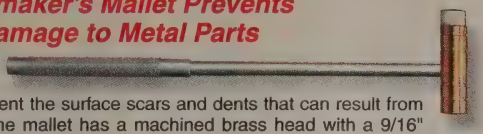
NEW!

Miniature Gear and Wheel Puller

This miniature tool pulls the gear or wheel off the shaft or axle without damaging either. Works on diameters up to 1/2".

#82392 Miniature Gear and Wheel Puller. . **$6.95**

Toolmaker's Mallet Prevents Damage to Metal Parts



The soft faces of our premium quality 2 oz. toolmaker's mallet prevent the surface scars and dents that can result from striking metal parts. The mallet has a machined brass head with a 9/16" diameter striking face on one end and a 1/2" dia. hard-plastic insert on the other. The light weight, easy-to-grip knurled aluminum handle lets you apply the striking force right where you need it—out at the striking face. Overall length 9-1/2 inches.

#81523 Toolmaker's Mallet . . . . . List $11.95 . . . . . Our Price **$9.95**

Micro Brushes Clean the Tightest Spots

Use these 5 micro size brushes to clean airbrush nozzles, R/C plane engines, spokes on model wheels, gear teeth...anytime small parts need cleaning. Nylon bristles scrub away dirt and grease without damaging surfaces. Brushes are 1/16" to 5/16" dia. by 3" long. Includes handle for the four smaller sizes.

#82149 Micro Brushes. **$6.35**

Anvils Make Miniature Metal Work Easier

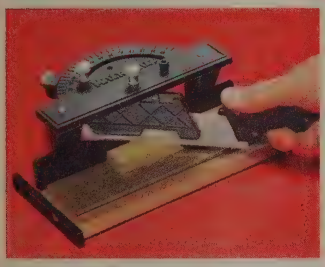
Anvils are extremely helpful when riveting, forming, shaping, bending, embossing, drilling or flattening metal...and whenever you need a hard working surface. The hexagon anvil can also be used for removing small friction-fit pinions, gears and wheels from shafts and axles.

A. #16104 Jeweler's Anvil.
Steel with chrome plated surface. 3/4" wide x 4-1/2" long x 3" high **$19.95**

B. #16105 Small Machinist's Anvil.
Cast iron with 1-5/8" x 3-3/8" machined working surface. 5" long overall x 2-1/2" high. Round horn tapers to 3/16" **$10.95**

C. #16103 Hexagon Anvil.
Case hardened tool-steel ground flat and smooth. 15 holes graduated from 1/32" to 1/4" and 5 milled slots. 1-3/4" across flats. 3/4" thick **$15.95**

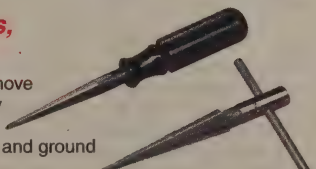
The Dobson Miter Rite...Precision in Miniature



Next to our powered Miter/Cut-Off machine, this is the finest miniature tool you can buy for making perfect angle cuts in wood, plastic and soft metal. Cuts are adjustable in 1° increments with a range of 65° on each side of 90°. Blade holder keeps blade absolutely perpendicular to the base, assuring straight and accurate cuts. Made of tough "football helmet" Cycolac plastic for a lifetime of use. Comes with one 54 tpi saw blade. Cuts stock up to 5/8" thick x 2" wide x any length. Color may vary.

#15215 Dobson Miter-Rite . . . . . List $29.95 . . . . . Our Price **$24.95**
#22118 Replacement Blade **$3.25**

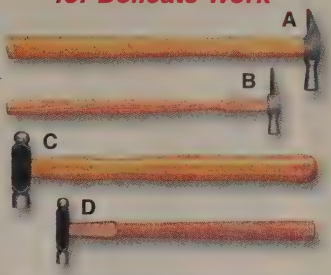
Reamers for Removing Burrs, Enlarging Holes



Tapered reamers can enlarge holes and remove burrs in metals, wood and plastic. Especially useful for deburring small diameter copper and brass tubing. Both tools have hardened and ground steel cutting edges.

#14462 Plastic Handle with 1/8" to 3/8" capacity. 6" long overall. **$12.95**
#15128 All Steel, T handle for extra leverage. 3/16" to 1/2" capacity. 5-1/2" long overall **$8.95**

Lightweight Miniature Hammers for Delicate Work



The perfect size tools for model railroading, ship modeling, doll-house miniatures and whenever a full size hammer just won't fit.

A. #22102 Hobby Hammer
An inexpensive tool that will get the job done. Use for driving home small pins, nails and model railroad spikes. 1-1/2 oz. steel head is 2-1/2" long. 9-1/2" long overall. Hardwood handle. **$5.25**

B. #22101 Jeweler's Quality Hammer
This is the finest quality hammer for miniature work we've seen. It's incredibly light and well balanced. Weighs only 1-1/4 oz. including the handle. One end is 1/4" dia. flat; the other is wedge shaped for hammering in the tightest places. Head is 2" long tool steel. Handle is hardwood. 7-3/4" long overall **$10.95**

Ball Peen Hammers
Use these miniature ball peen hammers for shaping metal or riveting. Excellent for use with one of our anvils.

C. #22119 2 oz. head **$4.95**
D. #81367 1 oz. head **$4.50**

Jeweler's Chasing Hammer Flattens and Shapes Metal

This well balanced, nicely made jeweler's hammer is ideal for use with one of our anvils when you need to shape or flatten metal. Polished tool steel head and hardwood handle. Flat end of head is 1" dia. Handle is 9-1/2" long. Weight is 5-1/2 oz.

#80811 Chasing Hammer **$8.95**

Heavy Duty Shop Apron Protects You From Gooey Glues and Messy Paints

Our below-the-knee-length blue denim apron is not only functional, but good looking as well. Has small pocket for pens, rulers, etc. and side pocket for whatever. Cotton straps tie in the back. Completely washable.

#60473 Denim Apron **$9.95**

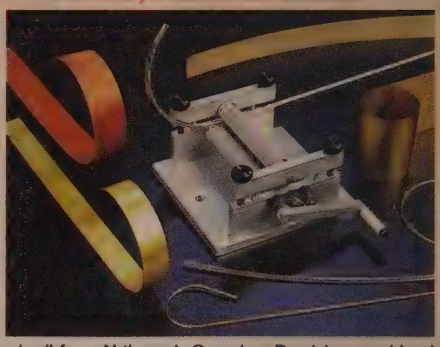
NEW!

Piloted Tap Wrench Speeds Production and Reduces Fatigue

The 1/4" shank on our piloted tap wrench fits into the chuck of a drill press or the mandrel of a tapping fixture to speed up production and reduce fatigue caused by extended tapping operations. Includes hex key for set screws and chuck tightening bar. Holds taps with .110" to .250" square shanks.

#82490 Piloted Tap Wrench . . . **$14.95**

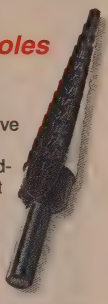
Professional Quality Machine Forms Smooth Curves in Wood, Plastic and Metal



There's never been a better, easier-to-use tool for making perfect bends in ship model planking. Works on wood strips up to 2-1/4" wide and 1/8" thick...even plywood! But that's not all: it will also make smooth, no kink curves in plastic and metal strip stock and in 1/16", 3/32" and 1/8" tubing and soft wire. Simply set the rollers for the desired radius and turn the crank to feed and form the material. You can even create perfect radius curves in model railroad rail from N through O scales. Precision machined of aluminum with steel gears. Rollers are 1/2" diameter by 3" long.

#81356 Bending Machine . . . . . List $129.95 . . . . . Our Price **$99.95**

Unibit® Drills and Deburrs Perfect Holes in Thin Materials



This single flute step drill is unlike any other drill bit you've tried. It drills ultra-smooth, perfectly round holes in hard-to-drill thin materials without grabbing or distorting. It has a self-starting tip and a tapered edge on each step that deburrs while it drills. Works on sheet and tubing up to 1/8" thick. Drills 13 diameters from 1/8" to 1/2" in 1/32" increments. Works on steel, copper, brass, aluminum, plastic and wood. Especially good for installing panel-mounted toggle switches. Industrial quality from the USA. 1/4" shank.

#81875 Unibit **$22.95**

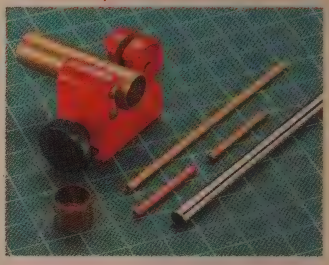
22 Piece Solid Brass Rod Assortment

8 pieces size 00 (.047")
6 pieces size 0 (.060")
5 pieces size 1 (.073")
3 pieces size 2 (.086")

All pieces are 12" long. Includes handy screw cap storage vial. Correct sizes for threading.

#80816 Brass Rod Assortment **$14.95**

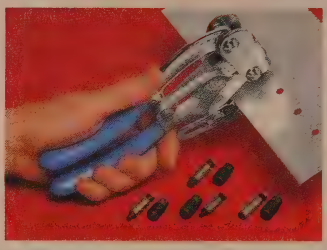
Mini Tubing Cutter for Clean, Accurate Cuts



Use for model builder's brass, aluminum, and copper tubing. Has 3 hardened steel wheels; 2 for guiding and one for cutting. Cuts tubing from 1/8" dia. to 7/8" dia.

#20132 Mini Tubing Cutter **$6.95**

Punch Accurate Holes in Plastic, Wood, Metal and More



Use our powerful hand punching tool to punch accurate round holes through all types of materials, from thin shim brass and plastic sheet through 16 gauge (.050" thick) mild steel. The adjustable edge guide lets you align holes in a straight line 1/4" to 1-1/2" from the edge of your workpiece. Includes seven quick-change, hardened punch-and-die sets in the following diameters: 3/32, 1/8, 5/32, 3/16, 7/32, 1/4 and 9/32 inch. Punch opens to 1/4"; throat depth: 1-3/4". Includes a molded plastic case for safe storage.

#81530 Power Punch Kit
List $39.95 . . . . . Our Price **$29.95**

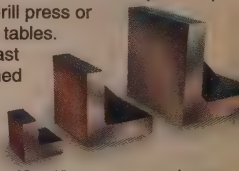
Spring Loaded Punch Improves Accuracy of Your Layout Work

Use this tool to mark accurate hole and alignment locations on metal, wood and plastic parts. How it works: hold the tip in place, pull up on the plunger and release. The spring-loaded plunger strikes the punch and creates a sharp indentation in the workpiece. Can even be used to make simulated rivets in thin sheet. Made from hardened steel with a lifetime spring and grooved ends for no-slip grip. 5" long.

#82087 Spring Loaded Punch . . **$12.95**

Toolmaker's Angle Plate Holds Your Work at a Perfect 90° Angle

Use these hard-to-find tools whenever you want to join or hold two parts edge-to-edge or edge-to-surface at a 90° angle. Also used to square up table saw, drill press or disc sander tables. Precision cast with machined faces and edges.



#60713 1" x 1" x 1". **$9.95**
#20123 2" x 2" x 2". **$14.95**
#60626 3" x 3" x 3". **$19.95**
#60714 Set of Three (one of each size) . . . **$37.95**

Micro Hand Vise

Unique hand vise allows wire or small diameter tubing to pass straight through the hollow handle and tightening screw. Jaws hold securely while you form, fit, finish, clean, etc. Holds wire up to 1/16" diameter and other objects up to 3/32" thick. Jaws are 3/8" wide. Overall length: 5". Made of blackened steel.

#81682 Micro Hand Vise **$8.95**

MICRO-MARK METAL SHOP

Premium quality half hard metal for ease in cutting, drilling, filing and bending. All items are 12" long. (Sheet metal is 10" long). All sizes listed are outside dimensions.

Telescoping Brass Tube .014" WALL

ITEM NO.	SIZE O.D.	PCS/ PACK	PRICE/ PACK
60196	1/16"	20	$10.00
60197	3/32"	15	9.00
60198	1/8"	15	10.00
60199	5/32"	12	8.40
60200	3/16"	12	9.00
60201	7/32"	10	8.50
60202	1/4"	8	7.60
60203	9/32"	8	8.80
60204	5/16"	6	7.50
60205	11/32"	6	8.40
60206	3/8"	6	9.00
60207	13/32"	4	6.40
60208	7/16"	4	6.80
60209	15/32"	4	7.40
60210	1/2"	4	8.00
60211	17/32"	3	6.45
60212	9/16"	3	6.90
60213	19/32"	2	4.90
60214	5/8"	2	5.20
60215	21/32"	2	5.60

4" x 10" Sheet Metal

ITEM NO.	SIZE	PCS/ PACK	PRICE/ PACK
60234	.005" Brass	6	$9.60
60235	.010" Brass	6	9.60
60236	.015" Brass	6	12.60
60237	.032" Brass	3	11.50
60238	.008" Tin	6	6.60
60239	.016" Alum.	6	7.20
60240	.032" Alum.	6	9.60
60241	.064" Alum.	6	14.20
60243	.025" Copper	3	12.30

Telescoping Aluminum Tube .014" WALL

ITEM NO.	SIZE O.D.	PCS/ PACK	PRICE/ PACK
60185	1/16"	15	$6.00
60186	3/32"	12	5.40
60187	1/8"	12	5.40
60188	5/32"	12	6.60
60189	3/16"	12	6.60
60190	7/32"	10	6.50
60191	1/4"	10	7.00

Solid Brass Rod

ITEM NO.	SIZE O.D.	PCS/ PACK	PRICE/ PACK
60223	.020"	50	$10.00
60224	1/32"	50	10.00
60225	3/64"	34	8.50
60226	1/16"	20	7.00
60227	3/32"	16	8.00
60228	1/8"	10	7.00
60229	5/32"	8	7.60
60230	3/16"	5	5.25
60231	.114"	10	7.50
60232	.081"	10	6.00
60233	.072"	16	7.20

Brass Channel .014" WALL

ITEM NO.	SIZE W X D	PCS/ PACK	PRICE/ PACK
60253	1/8" x 1/8"	10	$8.50
60254	5/32" x 1/8"	8	7.60
60255	3/16" x 1/8"	7	5.95
60256	7/32" x 1/8"	6	5.40
60257	1/4" x 1/8"	5	4.75

Brass Angle .014" WALL

ITEM NO.	SIZE	PCS/ PACK	PRICE/ PACK
60248	1/8" x 1/8"	10	$7.00
60249	5/32" x 5/32"	10	8.00
60250	3/16" x 3/16"	8	6.80
60251	7/32" x 7/32"	7	5.95
60252	1/4" x 1/4"	6	5.70

Telescoping Copper Tube .014" WALL

ITEM NO.	SIZE O.D.	PCS/ PACK	PRICE/ PACK
60192	1/16"	20	$10.00
60193	3/32"	15	9.00
60194	5/32"	12	8.40
60195	1/8"	12	8.40

Rectangular Brass Tube .014" WALL

ITEM NO.	SIZE	PCS/ PACK	PRICE/ PACK
60244	3/32" x 3/16"	4	$8.00
60245	1/8" x 1/4"	4	8.60
60246	5/32" x 5/16"	4	9.00
60247	3/16" x 3/8"	4	9.40

Telescoping Brass Hex Tube .014" WALL

ITEM NO.	SIZE ACROSS FLATS	PCS/ PACK	PRICE/ PACK
60278	3/32"	8	$5.50
60279	1/8"	7	6.00
60280	5/32"	6	5.50
60281	3/16"	5	5.50

Solid Brass Strip

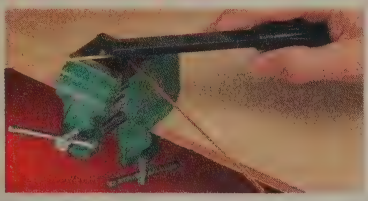
ITEM NO.	SIZE	PCS/ PACK	PRICE/ PACK
60258	.016" x 1/4"	20	$9.00
60259	.016" x 1/2"	15	7.50
60260	.016" x 3/4"	10	6.00
60261	.016" x 1"	10	7.00
60262	.016" x 2"	5	6.25
60263	.025" x 1/4"	15	8.25
60264	.025" x 1/2"	10	6.00
60265	.025" x 3/4"	6	5.10
60266	.025" x 1"	6	6.00
60267	.025" x 2"	3	5.80
60268	.032" x 1/4"	15	9.00
60269	.032" x 1/2"	10	6.50
60270	.032" x 3/4"	6	5.40
60271	.032" x 1"	5	5.50
60272	.032" x 2"	3	6.40
60273	.064" x 1/4"	8	6.80
60274	.064" x 1/2"	4	5.20
60275	.064" x 3/4"	3	5.25
60276	.064" x 1"	2	4.50
60277	.064" x 2"	3	11.20

Telescoping Sq. Brass Tube .014" WALL

ITEM NO.	SIZE	PCS/ PACK	PRICE/ PACK
60216	1/16"	12	$10.80
60217	3/32"	12	12.00
60218	1/8"	12	12.60
60219	5/32"	10	12.00
60220	3/16"	6	8.40
60221	7/32"	6	9.00
60222	1/4"	6	10.20

Make Perfect Bends, Even in Hard Music Wire

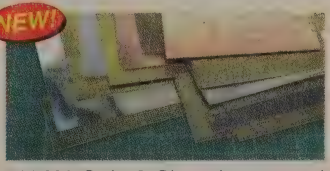
Wire, rod and strip bender makes angles, loops, eyes, U, C & S shapes in brass, copper, and steel, quickly and easily. Even bends the hardest music wire up to 1/8" diameter. Made of steel with rust resistant black oxide finish and hardened radius pins. 7" long arm and rubber grip gives extra leverage for tough materials. Must be locked in a vise during use.



#60346 Wire, Rod, Strip Bender **$11.95**

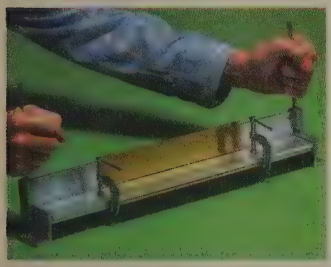
Bits and Pieces of Metal

#82497 A random assortment of sizes and shapes of tubes, rods and strips in lengths up to 7" **$7.95**



#82498 Strip & Sheet in assorted thicknesses (.005" to .064"), widths (1/4" to 4") and lengths (up to 12") **$8.95**

Form and Bend Metal with the "Mighty Mini" Bender



This versatile little bending brake makes clean, smooth bends up to 90° in metal up to 16 gauge thick and 18" long. And by cutting slots in the aluminum brake bar with a hack saw, you can form boxes, covers, trays, etc. with flanged edges up to 1". Adjustments for stock thickness, sharpness of bends and accuracy in bending duplicate pieces are quick and easy to make. Rugged construction and simple design assure a lifetime of trouble-free service. (C-clamps sold separately; see pg. 31).

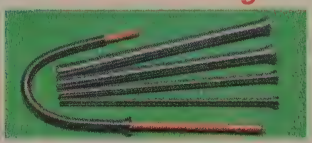
#50319 "Mighty Mini" Bender . . **$39.95**

Metal Forming Plier Set Bends Any Shape You Need

Our set will make loops, rings, S, C, Z, L and just about any other shape. Set bends strip stock up to 1/32" thick and wire up to 3/32". The strange looking plier at the top of the photo will even bend hardened music wire. Made of polished stainless steel with box joints that keep jaws in alignment. Orthodontist's use these and pay about $28.00 ***each*** from dental supply houses. We buy directly from the manufacturer. The result is a set of incredibly useful, well-made tools at a great price.

#60398 Metal Forming Plier Set. **$39.95**

No-Kink Benders for Small Tubing



Spring type benders with "funnel" ends let you make smooth, no-kink bends in small diameter brass, copper and aluminum tubing. Simply insert tubing into spring, make your bend, and then slide spring off. 5-piece set bends 1/16", 3/32", 1/8", 5/32" and 3/16" outside diameters. Nickel plated steel.

#60360 Tubing Bender Set **$4.95**

The Hot Wire Foam Factory Cuts and Forms Styrene Foam to Any Shape

Our Heavy Duty (HD) version of the Hot Wire Foam Factory has 30% more power than the light duty version that others sell. This extra power allows the use of a larger diameter wire that you pre-form into any desired shape. Just turn on the power and cut or form without the dust and mess produced by a saw or sur-form rasp. The hot wire slices through styrene foam like a hot knife through butter. Ideal for creating airplane wings and fuselages, contoured bases and mountains for diorama and model railroad scenery, craft items and much more. Styrene foam insulation board is lightweight, easy to handle and is readily available at lumberyards and home centers everywhere.

#81622 HD 3-in-1 Complete Foam Factory
Includes 12" x 14" hot wire scroll table for precision cutting and mitering, a hot wire hand tool for hand shaping and carving, a heated scribe tool for fine details and hole making, and a Heavy Duty 110V AC power supply with variable heat control and fuse. Also includes instructional video, 4 scroll table wires and 6 hand tool replacement wires. . . . . List $189.95
Our Price **$159.95**

#81623 HD 2-in-1 Mini Foam Factory
Includes everything in the 3-in-1 above, except scroll table. . . . . List $139.95
Our Price **$129.95**

#81624 HD Hot Wire Starter Set
Includes power supply, hot wire hand tool, 5 feet of .020" wire, and video . . . List $109.95
Our Price **$99.95**

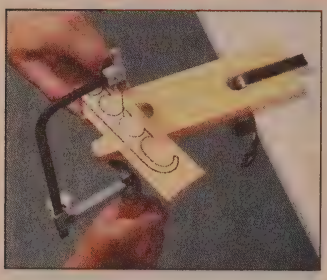
#81628 HD Hand Tool replacement wire (.020" dia x 5'). **$6.95**
#81629 HD Scroll Table replacement wire (6 pcs, .020" dia., with terminals). **$9.95**

Economy Hot Wire Tool for Basic Foam Shaping

#82104 Hot Wire Foam Cutter
Hot wire slices up to 5" deep into styrene foam board up to 4" thick. Comfortable handle has spring-loaded trigger for on-demand instant heating. Includes 2 contoured rods, 2 adjustable collars, .010" dia. wire, and 110vAC plug-in transformer. **$29.95**

#82105 Foam Cutter Bow and Guide Attachment
Adds versatility to #82104. 3" long wire with adjustable guide plate makes consistent cuts from 1/4" to 5" deep. Guide plate adjusts to precise angles. Includes bow, short rod, guide plate and .010" dia. wire (handle and transformer not included). **$7.49**
#82115 Extra .010" dia. wire (4' long). **$1.95**

Jeweler's Saw for the Finest Cuts in Any Material



Model makers, miniaturists and jewelers know how indispensable this well-balanced saw frame can be when it comes to intricate cutting. Blades will cut soft metals, wood, fiberglass, styrofoam and plastic. Adjustable frame permits blades to be drawn taut, and adjusts for blades 2-1/2" to 6-1/2" long – even accommodates broken blades. Nicely made with a steel bow, cast frame and hardwood handle. Cuts up to 2-1/2" deep. And because it uses ultrafine jeweler's blades (not included – sold below), it will give you finer cuts than any other hand saw available. (Shown with optional V block extension).

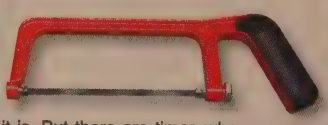
#22105 Jeweler's Saw **$13.95**

#20127 V block bench extension gives you extra control, support and space when working in fine detail with your jeweler's saw. Also helpful when filing and drilling. Clamp (included) fits any table up to 1-3/4" thick. 2-1/2" x 7". . . **$6.95**

JEWELER'S SAW BLADE SETS

#22107 24 blades; 12 coarse, 12 medium **$4.95**
#22108 24 blades; 12 fine, 12 extra fine **$4.95**
#22109 24 blades; 12 super, 12 ultrafine. **$4.95**

Fine Tooth Mini Hack Saw...Not Just for Metal

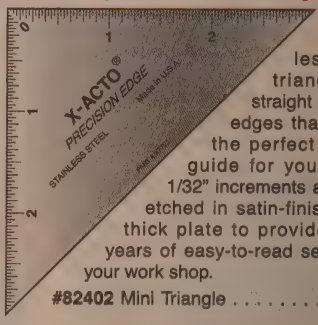


Most of us think of a hack saw for cutting metal only. Most of the time it is. But there are times when a razor saw blade is just too fine or a larger saw is just too coarse. Because this saw has a 26 tpi blade, it cuts metal well, but it's also handy for cutting plastic, wood dowels and other hardwood items. Knurled tension knob makes blade changes quick and easy. Made of chromed steel and cast aluminum. Holds standard 6" pin-end blades.

#60661 Mini Hack Saw . . . . . **$7.95** **#60684** 6" Hack Saw Blades (6) . . **$3.25**

NEW!

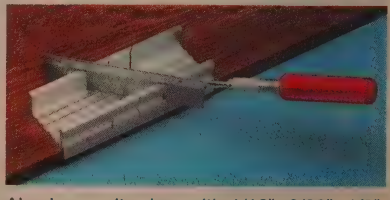
Mini Triangle Improves Accuracy



3" x 45° stainless steel triangle has straight and true edges that act as the perfect cutting guide for your knife. 1/32" increments are acid-etched in satin-finish .020" thick plate to provide many years of easy-to-read service in your work shop.

#82402 Mini Triangle **$7.95**

Miter Box and Saw for Precision 45° Cuts in Wood and Soft Metal



Aluminum miter box with 1/16", 3/32", 1/8", 5/32", 3/16" and 1/4" slots to hold narrow strips of wood or metal. Two 45° and one 90° cutting slots, machined for accuracy. 3/4" x 1-3/4" capacity. 6" long. Includes handle and 1-1/4" deep, 5" long, 24 tpi steel blade.

#22114 Miter box/saw set. **$12.85**
#22115 Miter box without saw. **$6.95**
#22118 54 teeth/inch blade **$3.25**
#81862 Replacement 24 tpi blade **$2.95**

CO-2 Dust Remover Cleans Delicate Equipment and Models

Our CO-2 Dust and Particle Remover is the world's smallest high-pressure cleaner for removing dust particles from models, audio/video, computer, electronic, photographic and stereo equipment. A special dispenser delivers a pinpoint blast of pure, harmless Carbon Dioxide gas from the enclosed cartridge. It efficiently blows away dust and debris from even the tiniest and most difficult to reach locations. Leaves no residue and won't harm the environment. (Dust Remover and Cartridges shipped by UPS ground only).

#82129 CO-2 Dust and Particle Remover includes dispenser, nozzle and three 12 gram cartridges . . **$19.95**

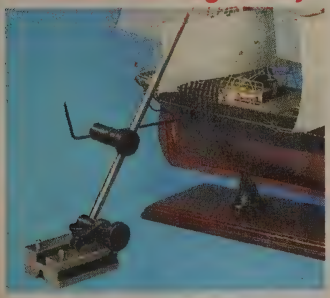
#82553 Replacement 12 gram cartridges (6) **$10.95**

Spiral Push Drill for Miniature Applications

Jeweler's drill operates by pushing the handle up and down along the spiral bar. Fast, easy, accurate and portable. Better than a pin vise for drilling multiple small holes in hard-to-reach places. Steel collet takes sizes from 0" to .039" (#61). Approx. 7" long.

#26101 Spiral Push Drill **$14.95**

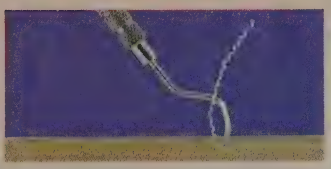
Tool Maker's Surface Gauge Gives You Precise Marking Ability



This precision tool is used by tool makers to mark a perfectly straight and parallel line at the exact height required. Excellent for marking scale ship model waterlines and for transferring gunport, porthole and other item locations from the ship's plan to the hull. Can also be used for marking-out raised panels, windows, chair rails, etc. in dollhouse construction. Adjusts quickly to approximate location with coarse adjustment knob and then to exact location with fine micrometer type adjustment knob. Measures and marks any height from 0" to 10". Made entirely of steel with ground and polished base and needle sharp scriber. Can also be used with a pencil.

#60520 Tool Maker's Surface Gauge
List $34.95 . . . . . Our Price **$24.95**

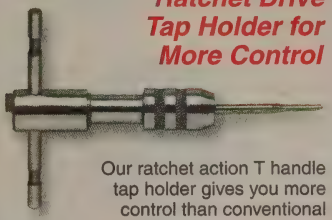
Scriber for Plastic Models



Use for making realistic looking recessed panel lines on models. Other scribers just move the plastic so you get a mound on the side of the line like a plowed field. Ours actually removes a thin hair of plastic without distorting the plastic. Made of stainless steel with a knurled no-slip handle. **Has scribers on both ends so it will last twice as long.** Will work equally as well on half hard brass and aluminum. 1/4" dia. x 6" long.

#60728 Panel Scriber
List $18.95 . . . . . Our Price **$11.95**

Ratchet Drive Tap Holder for More Control



Our ratchet action T handle tap holder gives you more control than conventional holders, especially on smaller size taps. And more control means fewer broken taps and better threaded holes. Changes from left to right to neutral at the flick of a lever. Made of polished steel with hardened and ground jaws. Holds all taps from 0-80 thru 6-32.

#15126 Ratchet Drive Tap Holder **$12.95**

Xuron Micro Shear... The Best Way to Cut Photo-Etched Parts

This precision tool cuts through tiny photo-etched parts cleanly and accurately with a scissor-like shearing action. Produces a neat, square edge without distorting adjacent parts. It's also ideal for cutting micro size parts from sheet brass. Made of hardened steel with cushion grip handles and spring return. An innovative design that makes a difficult job easier. Overall length approx. 5".

#81308 Photo-etch Shear
List $18.95 . . . . . Our Price **$14.95**

Revolving Punch Cuts Perfect Holes

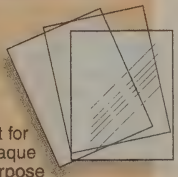
Revolving turret-head punch cuts easily through leather, plastic, canvas, cardboard...even thin wood veneers. Cuts hole sizes 5/64", 3/32", 7/64", 1/8", 5/32" and 3/16". Blackened steel with tempered steel punches, brass anvil and vinyl grip.

#82524 Hole Punch **$16.95**

Plastic Sheets

These plastic sheets can be used for fabricating model structures, car bodies, airplane cowls, dollhouse and miniature furniture "glass," windshields and other window glazing. Easily glued, they can also be vacuum formed to create specialized shapes.

ITEM#	SIZE	THICK	MATERIAL	QTY/PKG	PRICE/PKG
81771	9" X 12"	.010"	Clear Butyrate	6	$4.95
81772	9" X 12"	.015"	Clear Butyrate	6	$5.60
81773	9" X 12"	.030"	Clear Butyrate	4	$5.60
81335	11" x 14"	.020"	White Styrene	2	$2.50
80902	11" x 14"	.030"	White Styrene	1	$2.45
80903	11" x 14"	.060"	White Styrene	1	$4.60
81336	11" x 14"	.020"	Clear Vivak	2	$4.15
80905	11" x 14"	.030"	Clear Polycarbonate	1	$3.25
80906	11" x 14"	.060"	Clear Polycarbonate	1	$6.25



BUTYRATE - Optically clear, easily cut, dimensionally stable. Great for model window glazing. **STYRENE** - Multipurpose high-strength opaque plastic. Excellent for structure walls and roofs. **VIVAK** - Multipurpose high-strength clear plastic. Use for forming airplane canopies. **POLYCARBONATE** - An unbreakable, high-temperature plastic. Ideal for forming engine cowls.

Do It Yourself Vacuum Forming

An illustrated guide to small scale vacuum forming you can do at home without special skills and little equipment. By Douglas E. Walsh.

#80868 129 pages **$14.95**

Special Knife Cuts Plastic Faster, Cleaner and Safer

The Plasticutter scores plastic sheets without the danger of cutting your fingers. How it works: Drag the special hooked tip toward you to create a deep score on the plastic surface. Now bend the sheet at the score to snap apart the pieces ...it's that quick and that easy! Leaves no chips like sawing does. Includes a standard knife edge for chopping plastic strip. **#82131** Plasticutter **$4.95**
2 or more $3.95 ea.

Binocular Magnifier for Hands-Free Magnification

Our Binocular Magnifier gives you 3 dimensional viewing by providing magnification for both eyes. Optical quality glass lens magnifies objects 2-1/2 times at a working distance of 8 inches. Additional interchangeable lens plates are available separately for other magnifications (see chart at left). Comfortable, light-weight leather head-band has orthopedic felt padding and is fully adjustable to fit all head sizes. Tilts up and out of the way when not in use and can be worn over glasses. Attachment loupe shown is optional (doubles the magnification of any lens plate) – order below.

EXTRA LENS PLATES FOR ABOVE
$19.95 ea.

Item #	Magnifies	Working Distance
#52387	1-1/2 times	20 inches
#52388	1-3/4 times	14 inches
#52389	2 times	10 inches

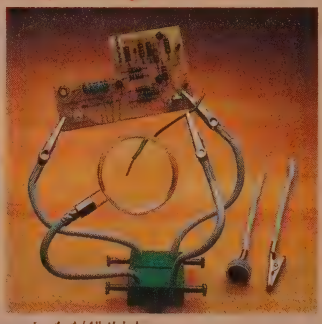
#18108 Binocular Magnifier **$32.95**
#18110 Attachment Loupe for above magnifiers only **$8.40**
#18111 All Plastic Economy Model (magnifies 2-1/2 times at 8 inches working distance). **$18.95**

VisorLIGHT™ Helps You See What You've Been Missing

*Visor*LIGHT's laser-sharp Xenon bulb produces an intense 6000 candlepower collimated beam of light which makes objects jump into brilliant view. Although designed for Optivisor headband magnifiers, *Visor*LIGHT may also be mounted onto machine tools, toolboxes, under counter tops...anywhere more light is needed. Includes pivoting mounting clip, rotary on-off switch and battery pack. Wire is 10" long. Powered by two AA batteries (not included).

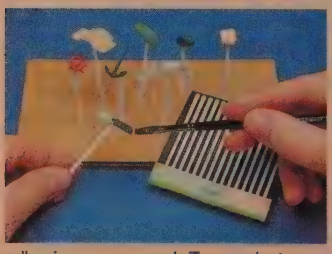
#82421 VisorLIGHT . . . . . **$19.95** **#82422** Spare Bulb **$5.95**

Four-Armed Holding Jig for Gluing, Soldering, Painting, Inspecting and More



This "third hand" securely holds small objects in any position and leaves your hands free for holding soldering iron, solder, paint brush, glue bottle, etc. Especially useful for solder assembly of multiple components. Clamps hold your first joint together so if you heat it again to add additional items the first joint won't fall apart. Includes 4 alligator clamps, 2" magnifier and magnet. 5" long flexible arms bend to any position. Set screws in base let you use the six components in any combination. Includes clamp for mounting base to any workbench up to 1-1/4" thick.

#60682 Four-Armed Holding Jig **$13.95**

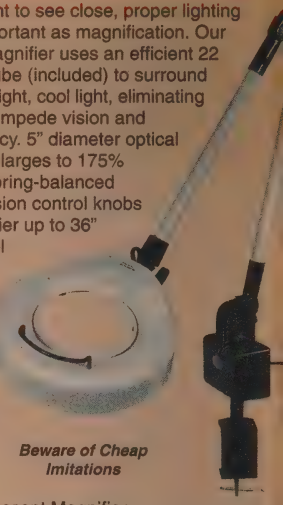


Pic•N•Stick...a Unique Tool for Holding Small Model Parts

This is the best tool we've seen for holding small model parts while painting or positioning. Originally made for the dental trade, Pick•n• Stick is a 2-1/2" long plastic stick with a waxy adhesive on one end. To use, just press the adhesive end against the part you need to hold. To remove, just twist. Adhesive grips tightly, but won't transfer to the part. Holds plastic model parts, cast metal ship fittings, miniature hardware and hundreds of other items. When painting numerous parts, push the non-adhesive end into a piece of cardboard or clay to hold the sticks while the paint dries. Each stick is reusable many times. Price is for 30 Pick•n•Sticks in 2 matchbook style packages.

#80339 Pic•n•Stick (30) **$9.95**

Fluorescent Magnifier Has Shadow-Free Lighting



When you want to see close, proper lighting can be as important as magnification. Our fluorescent magnifier uses an efficient 22 watt circular tube (included) to surround objects with bright, cool light, eliminating shadows that impede vision and reduce accuracy. 5" diameter optical quality lens enlarges to 175% actual size. Spring-balanced arms with tension control knobs extend magnifier up to 36" from the swivel base. Mounting bracket clamps to benches up to 2-1/4" thick. 120v AC. (Shipped by UPS ground only).

Beware of Cheap Imitations

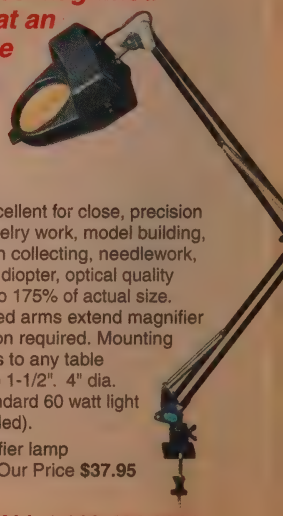
#82445 Fluorescent Magnifier
List $89.95 . . . . . Our Price **$69.95**

Deluxe Lighted Magnifier Adjusts to Four Magnifications

Our deluxe headband magnifier not only has twin-beam, focussed lighting, but also lets you select the magnifying power you need with just the touch of your finger. Contained under the hood is a special flip-down auxiliary lens plate you use in combination with the attachment loupe, providing magnifications of 1.8x, 2.3x, 3.7x and 4.8x. The comfortable headband can be worn with glasses and adjusts to any size with a Velcro-type fastener. Optical quality acrylic lenses. Requires four AAA batteries (not included).

#81838 Lighted Magnifier **$39.95**

Hands-Free Magnified Lighting at an Affordable Price



This is an invaluable tool when accuracy and visual clarity are critical. Excellent for close, precision inspection, jewelry work, model building, stamp and coin collecting, needlework, reading. The 3 diopter, optical quality lens enlarges to 175% of actual size. Spring-balanced arms extend magnifier to exact position required. Mounting bracket adjusts to any table thickness up to 1-1/2". 4" dia. lens. Uses standard 60 watt light bulb (not included).

#24101 Magnifier lamp
List $49.95 . . Our Price **$37.95**

Micro-Mark®
THE SMALL TOOL SPECIALISTS

HOW TO ORDER

FOUR *EASY* WAYS TO PLACE YOUR ORDER:

1. **BY PHONE: Call *TOLL FREE* 1-800-225-1066** (OUTSIDE USA & CANADA, CALL 1-908-464-2984)
2. **BY FAX: Dial 1-908-665-9383**
3. **BY INTERNET: Use our Shopping Cart at www.micromark.com**
4. **BY MAIL: Send to 340 Snyder Ave., Berkeley Heights, NJ 07922-1538**

HOW TO CONTACT US

TO PLACE AN ORDER

By phone: In USA and Canada, call **toll-free**, 24 hours a day, 7 days a week, **1-800-225-1066.** (Outside USA and Canada, call 1-908-464-2984). For fastest service, please fill out your order form completely before calling. After normal business hours (9 to 5 Eastern time weekdays), your order will be taken by automatic answering equipment. ***This number is for straight forward orders only. If you have questions, need specifications or advice, see information at right.***

By Fax: 24 hours a day at 1-908-665-9383. COD, credit card and purchase orders (for approved accounts) only. **Be sure to include code numbers from back cover.**

By Internet: Go to **www.micromark.com** for instructions.

By Mail: Use this order form or your own paper. Order by item number, price and a short description of the item. **Be sure to include code numbers from back cover.** Mail to Micro-Mark, 340 Snyder Avenue, Berkeley Heights, NJ 07922.

Note: Gift certificates are available. Do not add sales tax and shipping charges when ordering gift certificates.

PAYMENT

Pay by personal check (US bank only) or money order in US funds, or charge to VISA, MASTERCARD, AMEX, OPTIMA or DISCOVER/NOVUS. Include your credit card number, exp. date and signature. Orders paid by personal check will be held for check clearance. We also accept COD orders for shipments to the 48 contiguous US (street addressed shipments only, no PO boxes; payment by bank check or money order only—no cash). Add $6.00 additional for COD orders. NJ residents must add 6% sales tax (do not add sales tax to shipping charges).

Open Account: Available to businesses, government agencies, schools, etc. Please furnish 3 credit references with your initial order. Minimum retail order: $50.00; payment terms: Net 30 days.

IF YOU HAVE QUESTIONS

About an Order: Call our Customer Service Dept. toll free at 1-888-263-7076, 9 to 5 Eastern time weekdays, or contact us by e-mail at info@micromark.com

Need Technical Information about a Product: Call our Product Service Dept. at 1-908-464-1094, 9 to 5 Eastern time weekdays.

SHIPPING

We ship insured UPS or Priority Mail (at our option) whenever possible, so be sure to give your complete home or business street address. Most orders are shipped within 48 hours. (Shipping time may be extended to 72 hours during Nov. and Dec.). We ship most orders complete; however, if we must ship a partial order due to an out-of-stock situation, the shipment that completes the order is shipped freight free. Credit cards are not charged until shipment is made. **Shipping/Handling charges are not refundable.** Hazardous materials cannot be shipped outside the contiguous US.

SHIPPING/HANDLING CHARGES

MERCHANDISE TOTAL	48 cont. United States	Hawaii, Alaska, US Terr. & Poss. and Canada
$30.00 or less	$5.75	$5.75
$30.01 to $50.00	$7.25	$8.75
$50.01 to $75.00	$8.25	$11.75
$75.01 to $100.00	$9.25	$15.00
$100.01 to $200.00	$10.75	$19.50
$200.01 or more	$12.75	$25.50

Other areas: please call 908-464-6764
or fax 908-665-9383 for freight quotation.

© 2001 Micro-Mark® All items subject to availability. Products may vary slightly from photos. We reserve the right to make corrections due to typographical errors.

OUR NO-RISK GUARANTEE

You must be completely satisfied with every item purchased from Micro-Mark. If for any reason an item does not live up to your expectations, return it in original packaging within 30 days for an immediate refund or credit.

KIT RETURN POLICY

Kits are returnable only if the contents are in an undisturbed, like new, resalable condition. The return of a kit will ***not*** be accepted if:

1. The individual die-cut or laser-cut parts have been removed from wood sheets.
2. Construction has been started.
3. Bags of component parts have been opened.

NEED IT FAST?

TRY OUR QUICK SHIP SERVICE

Place your order by phone between 9 am and 12 noon E.T. Monday thru Friday. For an additional charge, we'll ship your order the same day by UPS Next Day or 2nd Day Air. Ask our sales representative for details when you phone in your order.

NOTE – This service is available on credit card orders only to US Addresses.

VISIT OUR EXPANDED WAREHOUSE STORE!

Location:
340 Snyder Avenue (rear entrance),
Berkeley Heights, NJ 07922

Hours:
Wednesday, Thursday, Friday 1pm-5pm
Saturday 10am-5pm • Closed Holidays

IN USA & CANADA **ORDER TOLL FREE 1-800-225-1066**
24 HOURS A DAY, 7 DAYS A WEEK
(OUTSIDE USA & CANADA CALL 1-908-464-2984)

PLEASE REMEMBER THAT OUR TOLL-FREE NUMBER IS FOR ORDERS ONLY. FOR INTERNATIONAL ORDERS AND CUSTOMER SERVICE, PLEASE CALL 1-908-464-6764, 9 - 5 WEEKDAYS, EASTERN TIME.

FOR FASTEST SERVICE FAX YOUR ORDER **FAX: 1-908-665-9383**

OR SHOP ON-LINE AT www.micromark.com

Micro-Mark®

340 Snyder Avenue
Berkeley Heights, NJ 07922-1538

NAME OF ITEM	ITEM NO.	QTY.	PRICE EACH	TOTAL PRICE
*GIFT CERTIFICATE	80461			
			MERCHANDISE TOTAL	
			Add 6% Sales Tax for N.J. Deliveries	
			COD add $6.00	
			Shipping Charge	
			TOTAL AMOUNT DUE	

ORDERED BY:
(If your name or address is incorrect or missing, please supply the correct information below).

CODE=1B316

RON PATTERSON
17355 WALNUT AVE
ATASCADERO CA 93422-6624

SHIP TO: (IF DIFFERENT FROM ABOVE OR IF "ORDERED BY" IS A PO BOX)
NAME _____
ADDRESS _____
CITY _____ STATE _____ ZIP _____
COUNTRY _____

PAYMENT METHOD:
❑ Enclosed is my check or money order payable to MICRO-MARK
❑ Ship my order COD (48 contiguous US only) for $6.00 additional.
❑ **CHARGE TO:**
❑ VISA ❑ AMEX/OPTIMA ❑ MASTERCARD ❑ DISCOVER/NOVUS
CARD NUMBER
Expires _____ Signature _____

*Micro-Mark gift certificates are available by mail, phone or fax. Specify amount in total price column. Do not calculate sales tax and shipping charges based on gift certificate value.

DAYTIME PHONE:
( )
(In case we have a question about your order.)

BE SURE TO INCLUDE SHIPPING/HANDLING CHARGES

MERCHANDISE TOTAL	48 cont. United States	Hawaii, Alaska, US Terr. & Poss. and Canada
$30.00 or less	$5.75	$5.75
$30.01 to $50.00	$7.25	$8.75
$50.01 to $75.00	$8.25	$11.75
$75.01 to $100.00	$9.25	$15.00
$100.01 to $200.00	$10.75	$19.50
$200.01 or more	$12.75	$25.50

Other areas: please call 908-464-6764 or fax 908-665-9383 for freight quote.

Detach at perforation.

Please send a Micro-Mark Catalog to my friends listed below.

NAME _____

ADDRESS _____

CITY _____

STATE _____ ZIP _____

COUNTRY _____

NAME _____

ADDRESS _____

CITY _____

STATE _____ ZIP _____

COUNTRY _____

NAME _____

ADDRESS _____

CITY _____

STATE _____ ZIP _____

COUNTRY _____

ORDER TOLL FREE
1-800-225-1066

24 HOURS - 7 DAYS A WEEK

SHOP ON-LINE AT www.micromark.com

For Customer Service, call

1-888-263-7076

Technical Assistance, call

1-908-464-1094

Mon-Fri 9am-5pm, ET

THANK YOU FOR YOUR ORDER

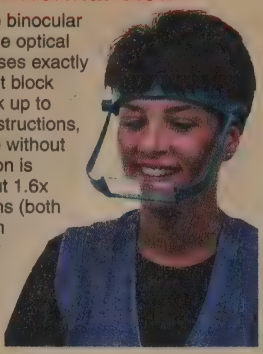
PLACE
STAMP
HERE

Micro-Mark®

THE SMALL TOOL SPECIALISTS

340 Snyder Avenue
Berkeley Heights, NJ 07922-1538

Magnify Your Workpiece without Blocking Your Normal View



With the Mag-Eyes hand-free binocular magnifier, you can position the optical quality acrylic magnifying lenses exactly where you need them and not block your normal view. Simply look up to select another tool or read instructions, then return to your workpiece without moving the visor. Magnification is easily changed by slipping out 1.6x lens and slipping in the 2x lens (both included). Lightweight, slip-on padded headband works well with or without prescription glasses.

#81463 Mag-Eyes Magnifier
List $31.95 . . Our Price **$26.95**

#82567 Mag-Eyes Plus Magnifier has all the features of the standard Mag-Eyes Magnifier, but includes more powerful lenses (2.25x and 2.75x) plus a 5x loupe for extreme magnification.
List $42.95 . . Our Price **$36.25**

Replacement lenses are available. See our web site for more information.

A Halogen Bulb and Flexible Arm Make this Our Best Magnifier Lamp

This well designed, high quality magnifier lamp makes assembly and close detail work easier and more accurate. Use for fine model, jewelry and electronic work, stamp and coin collecting, needlecraft, reading and whenever lighted magnification can improve the quality of your project. 5" optical quality lens tilts up and down so you can easily focus on your work. Flexible arm bends in any direction. Heavy steel base keeps lamp stable. Lens enlarges to approximately twice actual size. 13" distance from table to lens allows ample work space for your hands. 110v AC. 6' cord. Includes readily available halogen bulb.

#80762 Magnifier Lamp/Halogen Bulb
List $129.95 . . . . . Our Price **$79.95**

Accordion Lamp Extends to Where You Need It, Then Folds Out of Your Way

#60670 Accordion Lamp
List $24.95 . . . Our Price **$19.95**

This unique wall-mount lamp gives you the light you need when you need it, but won't get in your way when you don't. Reaches out 25" from the wall when extended. Also swivels 180° left or right of mounting bracket. Flexible "goose neck" directs light up or down. Has on/off switch and 6' cord. Ceramic socket lets you use up to 100 watt bulb (not included). 6-3/4" dia. shade.

Triple Grip Third Hand Keeps Your Hands Free

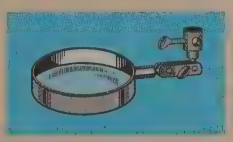
Used by jewelers, model builders, miniaturists, electronic hobbyists. Keeps your hands free for soldering, gluing, positioning, while work is held firmly at any angle required. Has 3 alligator-type spring clamps mounted in ball joints for flexibility. Nickel plated steel with heavy iron base for no-tip stability.

#21120 Triple Grip Third Hand
List $16.95 . . . . . Our Price **$12.95**

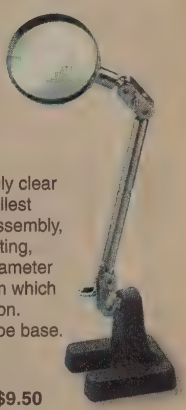
Magnifier.

Mounts on Third Hand cross bar for 2X magnification of the smallest details. Double ball joints for adjustment at any angle. 2-1/2" diameter glass lens.

#21135 Third Hand Magnifier . . . **$5.50**



Bench Magnifier Makes Miniature Work Easier, More Accurate



Bench magnifier with optically clear glass lens enlarges the smallest objects. Use for miniature assembly, model making, stamp collecting, map reading, etc. Has 2 " diameter lens attached to balljoint arm which can be angled in any direction. Mounted on sturdy horseshoe base. 2X magnification.

#18104 Bench Magnifier
List $12.95 . . . Our Price **$9.50**

Ott-Lites Give You True-Color, Non-Glare Lighting without Heat

The amazing Ott-Lite produces non-glare, balanced illumination that rivals the vibrancy and color clarity of natural daylight with almost zero heat. It does this with a low-wattage, full spectrum bulb that provides more effective lighting than a power-hungry conventional bulb. The result is color matching that is more accurate, details that are easier to see, and reduced eye strain. Available in two styles (see below).

#82225 Ott-Lite Foldup Lamp is a compact, lightweight unit that is designed for both tabletop use or wall mounting. Automatic switch turns the lamp off when the adjustable arm is folded down. Includes bulb and convenient carrying handle. 4" square x 10" high. 110vAC. . . . . List $79.95
Our Price **$69.95**

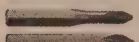
#82226 Ott-Lite Flexarm Lamp clamps to work tables up to 2" thick. It swivels on its base and flexes at both the bottom and the top of its 26" long arm. Includes on-off switch, bulb and wall-mount transformer. 110vAC.
List $99.95
Our Price **$87.95**

#82227 Replacement full spectrum 13 watt fluorescent bulb for above Ott-Lites. Same light output as 75 watt incandescent bulb. 10,000 hour average life. . List $24.95
Our Price **$19.95**

High Torque Power Screwdriver is also a Slow Speed Drill

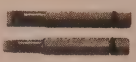
Designed like tools used in industrial assembly work, the MicroLux Power Screwdriver uses the combination of an internal reduction gearbox and a powerful reversible motor to deliver amazing torque (12.5 foot-pounds) in a compact hand-held tool. Speed is regulated between 240 and 2,500 rpm using the heavy duty transformer (sold below) which automatically boosts power to the tool under heavy load to maintain maximum torque even at slow speeds. To use as a slow-speed drill (especially useful for drilling plastics), we include a precision chuck that holds drill bits from 1/64" to 1/4" diameter. Also includes No. 1 Phillips screwdriver bit, momentary push-button power switch, reversing switch, hang-up hook and 44" cord.

#82478 MicroLux Power Screwdriver
List $64.95. . . . . Our Price **$49.95**



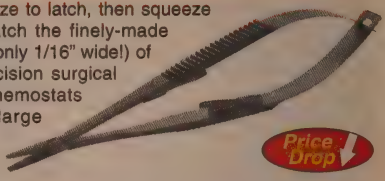
#82479 Phillips Screwdriver Bit Set
(1 each of nos. 0 and 1). **$7.95**

#82480 Flat Screwdriver Blade Set
(1 each of 1/8" and 5/32") **$7.95**



#60507 Heavy Duty Transformer (See page 11) **$74.95**

Magiclasp Forceps for Delicate Work in Confined Areas



Simply squeeze to latch, then squeeze again to unlatch the finely-made smooth tips (only 1/16" wide!) of this high-precision surgical tool. Unlike hemostats which have large looped handles and require sideways pressure to release, Magiclasp Forceps have a special in-line latching system and a petite outline that gives you perfect control over grasping, latching and releasing in tight locations. Made of satin stainless steel. 5-1/2" long x 3/8" wide with no-slip grips and integral leaf springs.

#82488 Magiclasp Forceps. **$19.95**

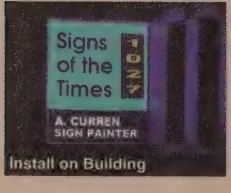
Jumbo Compass Cuts Circles in Plastic, Wood and More

We equipped our big, heavy duty compass with a knife handle so you can cut circles up to 16" diameter in sheet wood, cork, cloth, rubber and plastic. You can also replace the knife handle with a pencil and draw circles. Includes blade. Made of steel with locking pivot.

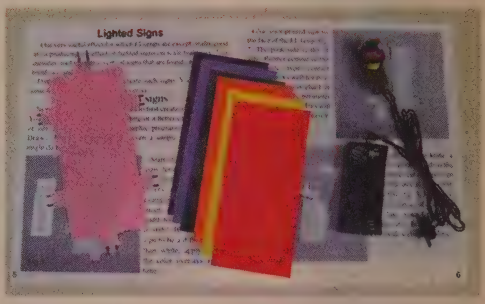
#82489 Circle Cutting Compass **$19.95**

#82542 Extra Blades (5) **$1.95**

Electro•Luminescent Lighting Makes Your Models Come to Life

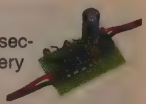


Attract attention and add drama to your models with these Electroluminescent (E.L.) lamps. Make your own lighted building signs, auto and airplane instrument panels, theater marquis, science-fiction special effects, etc...the applications are endless! Made from thin, laminated plastic sheets, these lamps give off a neon/fluorescent glow, without the heat and hot spots typical of other lighting. Just print your computer-created or hand-drawn full-color artwork on transparent film or decal paper, apply to the E.L. lamp and trim to shape. Then plug in the miniature power supply (requires two AAA batteries, not included) and hit the switch. Your model jumps to life instantly! And the bright light output makes your signs visible even in regular room light. The effect is awesome! Attract even more attention with a flasher unit (sold at right). All kits come with complete instructions.

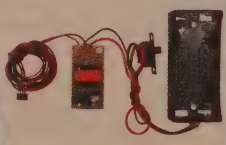


EXPERIMENTER'S DO-IT-YOURSELF KIT (makes from one to six lamps/signs). Includes one 1-3/4"W x 3-3/4"L x .010" thick lamp, six colored overlays, one power supply with switch, and 12 page instruction manual. **#25010** **$22.95**

Accessories



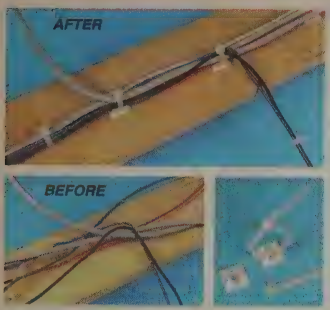
FLASHER UNIT Makes signs blink half-second on, half-second off. Wires into battery side of circuit. **#47010** **$5.95**



EXTRA BATTERY-POWERED POWER SUPPLY Powers additional signs made with #25010 Experimenter kit that are installed in remote locations. (Batteries not included).
#82369 . . . . . **$6.95**

WALL TRANSFORMER Converts 110V AC wall outlet to 3V DC needed for power supply...eliminates batteries and allows signs to be energized by wall switch. **#82368** **$6.95**

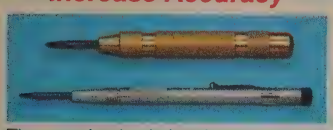
Cable Ties Make Wiring Jobs Neater, Easier and Faster



Electrical equipment manufacturers use cable ties to keep wiring harnesses well organized and protected from damage. Our 6" long x 3/16" wide natural nylon cable ties hold wire bundles up to 1-3/8" in diameter. Use cable ties by themselves to bundle wires, or with clamp to secure to enclosures or model railroad benchwork with #6 flat head screw (not inc.). Withstand pulls of 50 pounds or more. Package includes 100 each cable ties and clamps.

#82128 Cable Ties/Clamps (100) . . **$14.95**

Automatic Center Punches Save Time, Increase Accuracy

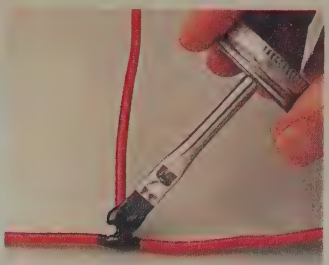


These spring loaded tools are excellent for creating a dimple in wood, plastic and metal to keep your drill bit from wandering. They're also used for starting wood screws, marking, perforating, embossing, simulating rivets and countersinking miniature nails. Just set variable pressure adjustment screw for light, medium or heavy stroke, press point against surface and the self-contained hammer mechanism automatically releases.

#10101 Machinist's Type. Hardened and tempered point. 1/2" diameter x 5" long. **$9.95**

#10102 Jeweler's Type. Lightweight, pencil size with aluminum body, pocket clip and hardened steel point. 5/16" diameter x 5-1/2" long. **$13.75**

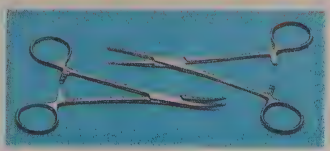
Liquid Electrical Tape Keeps Connections Moisture-Proof and Safe



Liquid rubber coating insulates electrical connections and seals out corrosion-causing moisture. Use on control panels, model railroad wiring, lighting circuits, PC boards, around the house and on auto, truck and boat wiring. Keeps terminal screws from vibrating loose. Just brush on and let dry. Won't crack, peel or harden. 4 fl. oz. can with brush applicator cap. Black color. (Shipped by UPS ground only.)

#82216 Liquid Electrical Tape . . **$7.95**

Surgical Hemostats. World's Smallest Vise?



Originally made for surgeons, hemostats are now used extensively by model builders, jewelers, miniaturists and electronic hobbyists. Use as a super slim needle nose plier, clamp, heat sink, vise, etc. Quality box joint construction. Stainless steel. Approx. 5" long. Serrated jaws.

#21110 Straight Hemostat **$6.95**
#21111 Curved Hemostat **$6.95**
Mix or Match Any Two **$5.95 ea.**

Locate the Center of Your Workpiece Without Complex Calculations

Use the Center Square to find and mark the exact center of round, square and octagonal parts up to 2-1/2" across. To find the center, insert the item into the "V" of the square and mark a line. Then, rotate the piece 90° and mark again. Made of precision ground steel.

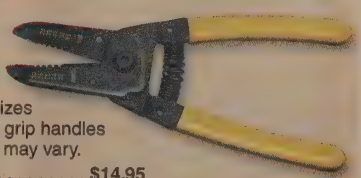
#82285 Center Square **$12.95**

Electronic Beacon– A Brilliant Idea for Your Lighthouse Model

Our special light circuitry simulates the appearance of a lighthouse beacon without using complicated mechanisms. Instead of just flashing, it ramps up the intensity of the lamp to a brilliant burst, then lets it slowly die off...just like a rotating beam of light. Includes plug-in transformer, 1-3/4"L x 5/8"W x 5/8"H circuit board, 1/2"L x 5/32" dia bulb, flash-rate adjustment control, all wiring and instructions.

#82106 Electronic Beacon Flasher **$21.50**

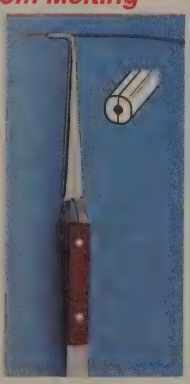
Hard-to-Find Wire Stripper for Micro-Size Wire



A beautifully made, professional quality wire stripper/cutter for fine wire sizes used in electronic, R/C and model railroad work. Strips AWG wire sizes #22 to 30. Tempered steel with cushion grip handles and spring return. 6" long. Handle style may vary.

#14221 Micro-Size Wire Stripper **$14.95**

Heat Sink Tweezer Keeps Insulation from Melting



Our cross-locking tweezer holds small diameter hook-up wire in place and draws heat away from the insulation so it won't melt. Keeps your soldering jobs neat and protects against short circuits and burned fingers. A half-round slot milled in both jaws holds wire securely. Made of stainless steel with heat resistant grips. 6" long.

#60393 Heat Sink Tweezer **$7.95**

You May Never Change a Light Bulb Again

Here's a scientific development that extends bulb life. The Button is a solid state microchip diode. It converts AC current to DC current and extends the life of a bulb filament up to 75 times. For example, a regular 750 hr. bulb would last for about 32 days if burned continuously. With the Button installed, that same bulb's life could be extended to 56,250 hours, or more than 6 years! Works on any single-wattage incandescent light bulb up to 200 watts. Used by major hotels, restaurants and corporations. Easy and safe to use. Simply peel off paper backing and stick the Button to bottom of bulb, then screw bulb into socket. 5 year warranty.

#14235 The Button, pkg. of six **$16.95**

Note: For use in North America and Latin America only. Bulb brightness will be reduced – use higher wattage bulb to compensate. For use with single-wattage standard tungsten light bulbs only.

Make Your Own Decals the Easy, Inexpensive Way

Create your own railroad names, logos, stripes, road racing emblems, stained glass windows, signs, aircraft and military markings and other custom artwork faster and in 1/10th the cost of custom decal services. Copy any pre-printed design or create your own artwork with ink and paper or with a computer drawing program. Then, duplicate your drawing onto the blank decal paper using an office copier or computer printer. For color copies, take the original drawing and decal paper to your local copy center. Works like any water-slide decal. Just cut out the decal, dip in water, and slide it into place. Use clear decal film for most lettering. Use white decal film when white is needed as a background color (many copiers and printers don't print white*). Each sheet of decal paper is 8-1/2" x 11". Complete instructions included.

**The Alps MD-series printers print white ink and are compatible with our laser decal paper; they use "dry ink" to print single colors or multiple combinations of white, gold, silver and many other colors.*

DECAL PAPER FOR LASER PRINTERS AND COPIERS

ITEM NO.	DECAL FILM/PAPER COLOR	SHEETS/PKG	PRICE/PKG
81485	Clear/White	5	$9.95
81486	Clear/White	25	$39.95
81487	Clear/White	100	$129.95
82370	Clear/Blue*	5	$11.95
82371	Clear/Blue*	25	$49.95
82372	Clear/Blue*	100	$169.95
81489	White/White	5	$13.95
81490	White/White	25	$55.95
81491	White/White	100	$181.95

*Makes white printing visible.

#82373 Try-it Pack. Contains one each of clear/white, clear/blue and white/white laser decal paper sheets. . **$8.95**

#82463 Laser Decal Fixative. A clear spray that seals and protects ink printed on laser decal paper. 3 oz. spray can. (Shipped by UPS ground only). **$3.29**

DECAL PAPER FOR INKJET PRINTERS

ITEM NO.	DECAL FILM/PAPER COLOR	SHEETS/PKG	PRICE/PKG
82272	Clear/White	5	$16.95
82273	Clear/White	25	$69.95
82274	Clear/White	100	$239.95
82277	White/White	5	$19.95
82278	White/White	25	$81.95
82279	White/White	100	$279.95

Note: Inkjet decals require a fixative spray. See #82276 below.

#82276 Inkjet Decal Fixative—a must for inkjet printed decals. A clear spray that keeps inkjet images from smearing or washing off. 4.5 oz. spray can. (Shipped by UPS ground only). **$8.95**

#82325 Try-it Pack. Contains one clear and one white inkjet decal paper sheet, plus one can of inkjet decal fixative. (Shipped by UPS ground only). **$16.75**

Note: Papers have been tested in most brands of printers, but the user must determine compatibility with his own equipment.

If You Want it to Look Old and Rusty, Nothing Will Do It Better Than Rustall

Model and photo by Pat Covert.

The RUSTALL system makes it easy to create a random, natural, rusty metal appearance on any material: wood, metal, styrene plastic, plaster and even paper. Just apply the water soluble liquid and powder components in 4 easy steps. Applications dry in under one hour. System includes a set of four 2 oz. bottles: (1) Rust Color, (2) Blackwash, (3) Dead Flat and (4) Dust Powder. (Shipped by UPS ground only).

#80755 RUSTALL System . . . **$15.95**

Railroad Weathering Colors

Includes quarter-ounce bottles of water-washup Polly*Scale* Aged White, Dirt, Aged Concrete, Railroad Tie Brown, Grimy Black, Mud, Rust and Gravel Gray, plus paint brush and mixing palette. Perfect for weathering all kinds of models.

#82132 . . . . . **$9.99**

Doc O'Brien's Weathering Powders

Doc O'Brien's weathering powders let you create an old, weathered appearance on scale vehicles, military models, trains, figures and aircraft. The ultra-fine powders are dusted on to simulate the effects of time and the elements. They're also used as weathering washes when mixed with water. One kit contains enough powder to weather dozens of models. Instructions included. Non-toxic.

#81632 Twelve color set includes Dirty Brown, Mildew Green, Grimy Black, Gritty Yellow, Rusty Red, Faded Blue, Rusty Brown, Grungy Gray, Patina Green, Desert Sand, Highlight White and Muddy Red **$19.95**

#82463 Flat Spray. A clear fixative for weathering powders, pastels and decals. 3 oz. (Shipped by UPS ground only) **$3.29**

Deluxe Finishing System Makes Decal Film Disappear

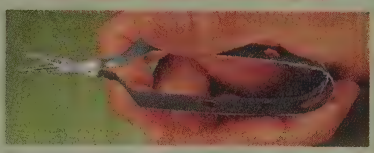
Nothing can spoil the realism of a carefully painted model more than decals that show a border of shiny film, have bubbles under the surface, or don't conform to tiny details. Our decal finishing system lets you achieve results so effective that lettering, stripes, emblems and logos appear to have been painted on the surface rather than applied by a decal film. Decals adhere bubble-free and cling tightly to every surface detail. Highly realistic results are obtained on painted or unpainted plastic, metal and wood surfaces by novice and expert alike. Includes 1 oz. each of 5 different solutions that set, soften, and coat decals to make decal film virtually invisible, plus 1 oz. of liquid film for restoring old decals and step-by-step instructions. This system is a must if you want to attain expert results. (Shipped by UPS ground only)

#82400 Deluxe Decal Finishing System **$16.50**

1 OUNCE REFILL BOTTLES

#82397 Decal Setting Solution **$2.25**
#82398 Decal Softening/Solvent Solution. **$2.25**
#82399 Liquid Decal Film/Restoring Solution **$2.25**
#81914 Clear Coat, Flat **$3.25**
#81915 Clear Coat, Satin **$3.25**
#81916 Clear Coat, Gloss **$3.25**

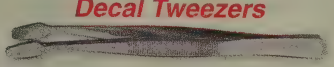
Squizzers...the Perfect Decal Scissors



These precision surgical scissors will cut out decals cleaner and closer than anything else you've ever tried. You'll also get exceptional control on dollhouse fabric, ship model rigging line and other miniature projects. Made of high quality 300-series stainless steel with blades that are hand ground under a 10 power scope. Guaranteed for life against corrosion or defects in material and workmanship.

#81204 Squizzers **$13.95**

Decal Tweezers



#60907 For perfect decal placement. Stainless steel. 4-1/2" long. **$3.50**

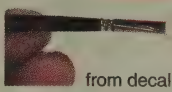
Flexible Precision Ruler Has Superior Legibility

Great for decal layout!

This exceptionally accurate ruler has easy-to-read scales and a translucent finish that lets model details show through. It's thin, flexible, dimensionally stable and measures both curved and flat surfaces. Scales include: 12" in 1/64" increments, 1/32" callouts; 300mm in .5mm increments, 1mm callouts; and 72 picas in 1 point increments (for lettering). Made of tear-proof engineering polymer. Government certified accurate to +/- .0002". Overall size: 2-1/2" x 14" x .007" thick.

#81873 Precision Ruler **$22.50**

Decal Blotter



#60764 Special sponge tip gently blots excess water from decal surface, leaving it ready for Finishing System application. **$3.50**

Easy-Lift-Off Paint and Decal Remover

Removes paint and decals from most plastics, metal and wood. 8 oz.

#60875 . . . . . **$7.95**

Mask-It EASY™ Protects, Then Peels Off Easily

Apply this high quality masking film where you don't want paint to stick. Works especially well in small crevices where masking tape is impossible to apply. Paint won't bleed through or seep under edges. Designs can be drawn on dried mask with a felt tip pen. To get supersharp paint separation, score with a hobby blade and peel off areas to be painted. Can be sprayed or brushed on. Dries in 1-2 hours. Thins and cleans-up with water. 8 fl. ounce bottle. This stuff works great!

#80923 Mask-It Easy. **$8.95**

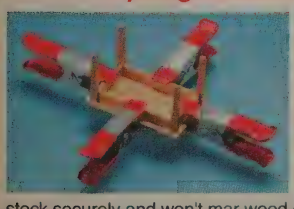
Simple-to-Use Spray Sets Make Airbrushing Easy

If you've never tried airbrushing before, these starter sets will show you that an airbrush is easy to use, and that even a simple one will apply a coating that is far superior to that of a regular spray can. These sets contain all you need to get started: airbrush, propellant and paint. Only three simple steps are needed to begin painting: 1. Snap airbrush onto propel can; 2. Fill jar with paint, and 3. Snap jar onto airbrush. Each set contains an external-mix single-action airbrush, 6 oz. of propellant, paint jar, 6 colors of ready-to-spray water-washup acrylic enamel, and a touch-up brush. You'll have such good results, you won't want to go back to "rattle can" painting again. Total value of each set exceeds $20.00! (Shipped via UPS ground only).

#82481 Model Car Spray Set includes gloss red, purple, black, teal, blue and flat primer **$13.95**

#82482 Military Aircraft Spray Set includes flat gunship gray, dark ghost gray, light ghost gray, neutral gray, olive drab and black **$13.95**

Extra Strong, Extra Comfortable Spring Loaded Clamps



The perfect size spring-type clamps for all types of miniature work, especially for the model builder and dollhouse miniaturist. Vinyl grip handles make them extra comfortable to use. Vinyl covered jaws hold stock securely and won't mar wood or other delicate material.

#15122 1" capacity, 4" long overall. Set of 4 clamps . . **$5.95**
#81839 5/8" capacity, 2" long overall. Set of 8 clamps . . **$5.95**

Super Leverage Metal Shear Cuts Steel, Brass, Copper and Aluminum

The unique design cuts like a male/female punch and die, not like a scissor. That's why it's the only tool we know of that will cut sheet steel up to 18 gauge (.0478") for under $100.00. It will also cut thicker, softer metals (aluminum and brass up to .065") with a lot less effort. Spacing between the hardened steel jaws can be adjusted to accommodate wear and different thicknesses of metal. Made entirely of steel with vinyl grip handles. 10" long overall.

#60662 Metal Shear . . . . List $16.95 . . . . Our Price **$12.50**

When you're making more than one...

Our Premium Quality Casting Materials Are User Friendly– *and Economical*

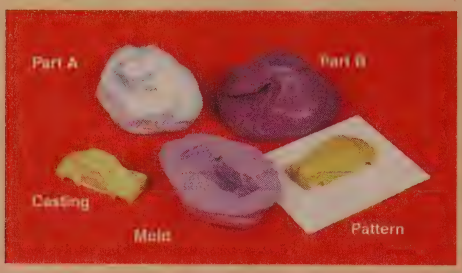
Use the same materials and techniques that professionals use to build their models. Our silicone mold rubber and urethane casting resins faithfully reproduce even the most microscopic details, so you can be assured of getting exact duplicates of your most highly detailed patterns. You can even make metal castings with our special alloys shown on the next page. And they're so easy to use, you can make perfect castings in as little as 15 minutes!

Liquid Silicone Rubber for Making Molds

ONE-TO-ONE/RAPID mold making rubber is your best choice for making duplicate parts with our casting resins. Unlike hard-to-measure 10 to 1 silicones, this RTV (room temperature vulcanizing: cures without heat) silicone rubber is easy to mix: simply stir equal parts of A and B together and pour. ***ONE-TO-ONE/RAPID*** mold rubber de-airs without a vacuum pump and reproduces every detail of your pattern. Instructions for making molds are included. Two-pound kit contains approximately 66 cubic inches of material, enough to make six molds 1/2" thick x 4" x 5", four molds 1" thick x 3" x 5", or two molds 2" thick x 3" x 5", etc. Flexibility of mold allows you to make 50 to 100 resin castings, even those with slight undercuts. ***ONE-TO-ONE/RAPID*** is a genuine silicone rubber, so it can be used for casting small metal parts with our low-temperature alloys (withstands up to 600°F). Includes 1 lb each of parts A and B. 30 minute "pot" life, 4 hour cure.

#82083 ONE-to-ONE/RAPID Mold Rubber (2 lbs total) **$29.95**

Silicone Putty Makes a Mold in Just 5 Minutes



Make a mold in just 5-minutes with this RTV silicone putty. Use your fingers to mix equal amounts of parts A and B and press the putty around your pattern. After 5 minutes, remove your pattern and your mold is ready for use. Fill mold with resin, plaster, wax...anything.

#81853 Mold Putty, 1 lb. total **$27.50**

Resin for Making Castings

Our ***CR*** water-thin urethane casting resins mix and pour easily, resulting in perfectly formed, bubble-free castings. Just mix equal parts of A and B together; the resin is odorless, gives excellent reproduction quality, and can be painted, sanded, sawn, tapped, milled, filed and drilled easily. Cures to white color. Compatible with all mold materials, including latex, clay and RTV silicone. Also acts as a super-strong glue for bonding metal, softwood and plastic. Resists fuels, acids and most chemicals when cured, is not tacky, and has no oily coating after curing like other casting resins. Includes 16 fl oz each of parts A and B in dispenser bottles and complete instructions.

#81544 CR-300 Casting Resin:
3 minute pot life; demold in 10 minutes (32 fl oz total) **$24.95**

#82057 CR-600 Casting Resin:
7 minute pot life; demold in 30 minutes (32 fl oz total) **$24.95**

Pigmentable Resin for Colorful Castings

ColorCAST Resin

Has the same properties and cure times as our water-thin urethane CR-300 resin, but has a transparent neutral-amber color that lets you cast-in color by adding pigments sold at right.

#82133 ColorCAST Resin: 3 minute pot life; demold in 10 minutes (32 fl oz total). . **$24.95**

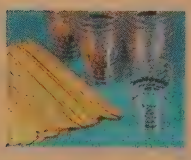
Highly Concentrated Opaque Pigment

Requires only 2 or 3 drops per ounce of resin for full color. Can be blended into an infinite number of custom colors. Compatible with epoxy, polyester and our *ColorCAST* urethane resins. 1 ounce squeeze bottles.

#82134 White **$4.95**
#82135 Black **$4.95**
#82136 Red **$4.95**
#82137 Orange . . **$4.95**
#82138 Blue **$4.95**
#82139 Green . . . **$4.95**
#82140 Yellow . . . **$4.95**
#82141 Brown . . . **$4.95**

#82142 Set of all 8 pigments
Save 25%. **$29.95**

Accessories



#82415 Mixing Set. Includes twenty-four 2 oz. capacity plastic mixing cups (calibrated in quarter-ounce increments up to 1-1/2 ounces) and twenty-four stir sticks. **$9.95**

#80475 Mold Release. Required when making 2 part RTV molds. Keeps mold halves from sticking together. 2 fl. oz. **$6.50**

#80352 Mixing Set. Includes six 8 oz. calibrated plastic mixing cups, six stir sticks, three brushes. **$4.95**

#80476 Kleen Klay. A special synthetic clay that will not contaminate silicone rubber. Use for containing flow of RTV during mold making and for making simple molds. (Place a little talcum powder on the part and press it into the clay. Then carefully remove the part and pour resin into the cavity). 1 lb. **$5.95**

SPECIAL OFFER! COMPLETE STARTER SET SAVE EVEN MORE!
#82084 Includes one each of 82083, 82057, 80475, 80476 and 80352 . . . . . $59.95

Cast Your Own Metal Parts with These Low Temperature Alloys

Now you can cast small metal parts with fine detail with our complete selection of casting metals and materials. No foundry is needed—just melt the metal in a ladle held over a flame and pour into a silicone rubber mold. Save money by casting your own ship fittings, miniature figures, toy wheels, dollhouse hardware, model railroad detail items and much, much more...and have fun doing it!

#80962 Type 160. Tin/lead/cadmium/bismuth alloy. Melts at approx. 160°F. Can be melted with a candle flame. Extremely low temp. allows this metal to be poured into molds of clay, wood, even cardboard. Can also be poured into model RR locomotives to increase traction weight. Keep away from children. One 11.4 oz. bar (approx. 3/4" x 1-1/2" x 1-7/8") **$14.95**

#80960 Type 280. Tin/bismuth alloy; lead and cadmium free. Melts at approx. 280°F. Can be melted with small butane torch. One 11.4 oz. bar (approx. 3/4" x 1-1/2" x 1-7/8"). **$14.95**

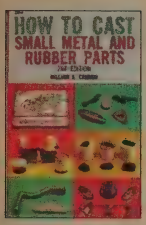
#82388 Type CT. Almost pure lead. Melts at approx. 500°F. Can be melted with propane torch (plumbing type torch sold at hardware stores). Keep away from children. One 27 oz. bar (approx. 2" x 2" x 1-3/8"). **$10.95**

#82319 Type R. Lead-free Crown Pewter (92% tin). Melts at approx. 575°F. Can be melted with propane torch (plumbing type torch sold at hardware stores). One 21 oz. bar (approx. 1-1/2" x 1-5/8" x 2"). **$19.95**

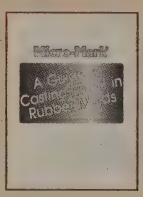
Note: Molds last longer when used with Type 160 or Type 280 alloys.

Pour these metals into a ***One-to-One*** *rubber mold to form your own castings*

Accessories and Instructions



#80318 *How to Cast Small Metal and Rubber Parts by William A. Cannon.* Provides instructions for casting small parts using proven methods, with updated chapters on the technology of urethane casting. 168 pages. **$14.95**



#80965 *A Guide to Casting Metal in Rubber Molds.* Explains how to make molds and successfully cast small metal parts. **$2.50**

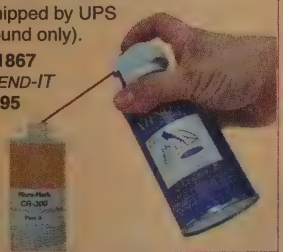
#80964 Steel melting and pouring ladle. 2-1/2" dia. bowl . . **$9.95**

#80966 Industrial Talc. Used to de-air molds for even metal flow. A must for use with RTV rubber molds. Approx. 2 oz. package. **$2.95**

Xtend-It Prevents Paint, Stain, Resin and Glue from Drying Out

Air and moisture trapped inside opened containers cause paints, stains, resins and glues to skin over, foam or dry out. This is costly and wasteful. So when you're done painting, gluing or casting, spray a little XTEND-IT into the container before sealing. It will replace moisture-laden air with a dry gas and increase the shelf life of the contained liquid by four times or more. Net wt. 7 oz. (Shipped by UPS ground only).

#81867 *XTEND-IT* **$9.95**



Milliput...The Incredible Modeling Putty from England

Milliput is the 2 part, easy-to-use epoxy putty that molds like clay and cures to the hardness of porcelain. Use for scratch building, sculpting, repairing, gap filling, pattern making and customizing. Ideal for military miniatures, ship model parts, dolls, dollhouse accessories, plastic models and thousands of other items. Roll it as thin as 1/64" for making super detailed scale parts (see sculpting set below). Can be sawn, drilled, filed, sanded and painted when cured. Smooths with a wet finger and cleans up with water before it cures. Fully cured in 5 hours without heat or sooner with a hair dryer. The choice of master model makers throughout the world.

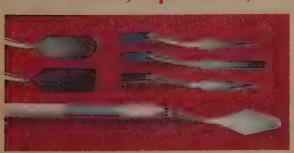
#81004 Standard Grain Milliput, gray color, net wt. 4 oz. **$6.95**

#81005 Superfine Grain Milliput, pure white, net wt. 4 oz. **$11.95**

#81006 Milliput Sculpting Set. Includes instruction booklet, two stainless steel sculpting tools, 1" diameter x 4" long solid polyethylene rod for rolling Milliput into thin flat sheets and 2 oz. industrial talc to prevent adhesion while rolling. **$12.95**

#81007 One of each item number above. Save 15% **$26.95**

Miniature Spatula Set Mixes, Fills, Spreads, Sculpts



This miniature spatula set is ideal for mixing epoxy, forming fillets, spreading body filler and sculpting with clay. Set includes 6 different chrome plated, spring steel blades and aluminum handle. Blades range from 1/4" to 5/8" wide.

#81012 Spatula Set **$9.95**

Carving Set for Milliput, Clay, Putty and More

Carving set includes five double-ended stainless-steel carvers with round, triangular, square, tear-drop and needle-point tips. Sharp cutting edges and knurled gripping surfaces give you the control necessary for precision pattern and model making. Each carver is 7" long.

#81661 5-pc. Carving Set **$14.95**

FLOQUIL AMERICA'S FINEST SOLVENT BASED PAINTS

Floquil model paints are actually made "to scale" by grinding the pigments to microscopic size. The result is a smooth, skin tight coating, 2 millionths of an inch thick, with tremendous covering power that will not obscure the finest surface details. Dries to a permanent, waterproof, dust-free finish in two to five minutes. Will not crack or peel. Use on almost any material: wood, brass, plastic, metal castings, ceramics, plaster of paris, fabric, glass, leather. For spray or brush application.

FLAT LUSTERLESS COLORS. 1 oz. Bottle . . . . . **$3.29 ea.**

#60104 Rail Brown	#60110 Weathered Black	#60118 Burlington Grn	#60125 Dark Blue	#60134 Earth	#60141 S.P. Letter Gray
#60105 Primer	#60112 Flesh	#60120 Dark Green	#60129 Conrail Blue	#60135 Concrete	#60168 Tuscan Red
#60106 Engine Black	#60113 Tuscan	#60121 Light Green	#60130 Signal Red	#60136 Mud	#60170 Oxide Red
#60107 Reefer White	#60114 Reefer Orange	#60122 Depot Olive	#60131 Roof Brown	#60138 Antique White	#60172 Dust
#60108 Reefer Gray	#60115 Reefer Yellow	#60123 Pullman Grn	#60132 Rust	#60139 Depot Buff	#60173 Grime
#60109 Grimy Black	#60116 Railbox Yellow	#60124 Coach Green	#60133 Box Car Red	#60111 Caboose Red	#60127 GN Big Sky Blue

Metallic Colors, non-tarnishing 1oz. bottle. . **$3.29 ea.**

#27119 Old Silver
#27120 Bright Silver
#27122 Bright Gold
#27123 Brass
#27124 Copper
#27126 Gun Metal

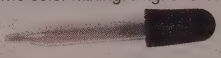
Accessories and Preparations

#15191 Dio-Sol Solvent for brush clean-up. 8 oz. **$6.49**

#82463 Flat Spray Changes gloss surfaces to dull flat. Also a fixative for pastels and decals. 3 oz. **$3.29**

#60873 Plastic Prep Anti-static and cleaning agent for plastics. Removes mold-release lubricants for best paint adhesion. 8 oz. **$5.49**

#27138 Pipettes Eye droppers for drop-at-a-time color mixing. Pkg. of six . . **$3.95**



#27136 Glaze Lt. amber, med. gloss coating. Also used to prime wood. 1 oz. . . **$3.29**

#82585 Figure Primer Special light gray primer for cast metal figures and ship fittings. 3 oz. spray **$4.79**

#27135 Crystal Cote Clear, glossy coating and fixative. 1 oz. **$3.29**

#60875 Easy-Lift-Off Paint and Decal Remover Removes paint and decals from most plastics, metal and wood. 8 oz. **$7.95**

#81548 Airbrush Thinner 16 oz. can **$7.95**

All paint items except pipettes are shipped via UPS ground only.

Paint Mixing Bottles

Empty bottles with 28mm inner seal caps. Use for mixing and storage of paints and others liquids. Package of 6 bottles.

#15192 One-Ounce Bottles **$6.95**
#81267 Half-Ounce Bottles **$4.95**

Convert Your Paint Bottles into Convenient Touch-Up Colors

Replace the 28mm caps on your Floquil bottles with these brush-caps to make touch up work fast and easy...and you won't have to clean the brush after each use. Sealing washer in cap keeps paint fresh. Extra-fine nylon brush works with solvent or water based paints. Use as is for 1 oz bottles, or trim stem for 1/2 oz bottles. Also fits our empty mixing bottles #15192 and #81267.

#81747 Brush-Caps (pkg. of 20) **$9.95**

Mini Pump Dispenses Paint Thinners Without Spilling

Our mini pump makes it easy to add thinners to paint mixing bottles without spilling either the thinner or the paint. Screws directly onto Floquil 8 oz. Dio-Sol and Airbrush Thinner cans, 1 oz. mixing bottles and many other containers. Pump seals tightly closed after use with just a twist. Includes 7-1/2" suction tube which can be shortened easily for smaller containers. Fits 26-28 mm threads. Made of solvent-resistant plastic.

#81741 Mini Pump, set of 2 . . . . . **$6.95**

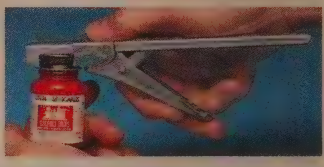
Palettes for Mixing Paint and Epoxy Without the Mess

Economical palettes for mixing paint, epoxy, weathering washes and stains; holding small parts during model assembly or repair; small parts cleaning. 3" diameter polyethylene with a lip for wiping excess paint from brushes. 40 palettes per package.

#81742 Mixing Palettes (40) **$6.95**

"Ordering from you is always a pleasure."
David D., Johnson City, TN

Remove Stuck-On Jar Caps Easily



Adjustable tool removes caps from all sizes of paint jars in seconds. Also removes snap on caps, soda bottle caps, vacuum caps, jar covers, soft-drink tabs and other screw on caps up to 5" dia. Made of chrome-plated steel. Buy one for the shop and one for the kitchen.

#81313 Jar Opener **$5.95**
Two or more **$4.95 each**

Badger MODELflex...Premium Quality Water-Based Paint for the Modeler

MODELflex is an easy-to-apply, fast drying acrylic coating that provides excellent coverage without obscuring fine details. Because it's water-based, it has no foul solvent odor and cleans up quickly and easily. MODELflex adheres extremely well to wood, plastic, pewter, steel, aluminum, brass, lead, fiberglass, gourds, casting resin, plaster, glass, leather and paper. In most cases primers are not necessary. Color can be applied by brush or airbrush straight from the bottle since thinning is not necessary. It dries to a satin finish in 15 minutes, or just 5 minutes with a hair dryer. Try Badger MODELflex today...you won't be disappointed.

MODELflex 1 oz. Bottles . . . . . **$3.25 ea.**

81877 Engine Black
81878 Reefer White
81879 Grimy Black
81880 Reefer Gray
81881 Weathered Black
81882 Antique White
81883 Signal Red
81884 Caboose Red
81885 Concrete Gray
81886 Primer Gray
81887 Dk. Tuscan Oxide Red
81888 Lt. Tuscan Oxide Red
81889 Conrail Blue
81890 Sand
81891 Santa-Fe Red
81892 Santa-Fe Silver
81893 Santa-Fe Yellow
81894 Milwaukee Brown
81895 Southern Sylvan Green
81896 BNSF Green
81897 BNSF Orange
81898 Rust
81899 Mud
81900 Earth
81901 Rail Brown
81902 Roof Brown
81903 Gloss Black
81904 Gloss White
81905 Gloss Red
81906 Gloss Blue
81907 Gloss Green
81908 Bright Orange
81909 Gloss Silver
81910 Gloss Yellow
81911 Flat Black
81912 Flat White
81913 Extender*
81914 Clear Flat
81915 Clear Satin
81916 Clear Gloss

#80761 33mm Siphon Cap lets you mount ready-to-spray MODELflex paint bottles directly to your Aztek airbrush. Includes cap, bottle and siphon tube. . . . **$5.95**

MODELflex cleans up with water, but this special cleaner contains ingredients which makes clean up faster and more thorough.

#81917 MODELflex Cleaner (16 fl. oz.) **$9.25**

*Increases drying time.

Accessories for Acrylic Paint

#82223 Use Acryl Cleaner to clean airbrush components immediately after spraying. Does a better job than plain water. While spraying, dilute 50% with water and flush airbrush between color changes. Keeps airbrush from clogging and colors from mixing. 4 fl oz. . . . **$4.95**

#82471 Deep-cleaning, high-strength Dried Paint Solvent removes Model Master, Pollyscale, MODEL-flex and other acrylic paints that have been dry for more than 24 hours. Use on airbrush components: nozzles, color cups, siphon caps, etc. 1-3/4 fl oz. . **$3.95**

Each shipped via UPS ground only.

Parafilm M™ – The Conformable, Stretchable Masking Material

This new masking material cuts easily and conforms to complex shapes and fine details. It produces sharp paint separation without bleed-under, peels off easily, won't pull off decals and metallic paints, and doesn't leave an adhesive residue. Ideal for camouflaging aircraft and military models, creating custom car paint schemes and detailing intricate model parts. Complete instructions included. 2" wide x 25' roll.

#80806 Parafilm M **$7.95**

The Best Masking Tape You'll Ever Use...From 3M

This ultrathin masking tape will follow curves like none you've ever tried...and because it's a flexible plastic, it clings and conforms to fine details. Tape holds tightly, yet is removed easily without leaving an adhesive residue. You'll get the sharpest edges you've ever seen!

#60725 1/8" wide x 36 yds. long . . . **$8.50**
#60726 1/4" wide x 36 yds. long . . . **$8.95**

#60727 Set of one each of the above **$15.95**

Burnish Masking Tape to Stop Paint Bleed-Under

Our stainless steel burnisher presses masking tape down tightly to avoid paint bleed-under. Has a spoon shape on one end for flat surfaces and a pointed end on the other for pressing tape into tight recesses. Also works on rub-on dry transfer decals. Approx. 6" long.

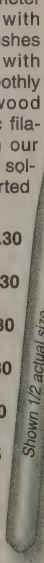
#81203 Burnisher **$5.95**

The World's Smallest Specialty Brushes with the Handle You'll Love

These beautifully made brushes are ideal for models, miniatures, bird carvings, wildfowl art and whenever super fine details are an important part of your project. The unique comfort-grip handles (about the same diameter as a pencil) let you paint with complete control for hours. All brushes are approximately 6" long with seamless nickel ferrules and smoothly sanded and lacquered hardwood handles. The extra fine synthetic filament is the same as we use in our Golden Eagle brushes. Use with solvent or water based paints. Imported from Japan.

A. #81205 10/0 Filbert **$6.30**
(rounded tip)
B. #81206 20/0 Script **$6.30**
(for pin stripes)
C. #81207 12/0 Angular **$6.30**
(tip cut 45°)
D. #81208 20/0 Round **$6.30**
(with sharp point)
E. #81209 20/0 Spotter **$6.30**
(for tiny details)
F. #81210 12/0 Grass Comb **$6.85**
(for grass, hair etc.)
G. #81211 10/0 Shader . . . **$6.30**
(flat, straight tip)
H. #81212 20/0 Liner **$6.30**
(for thin lines)

#81213 Best Buy! Set of 8 . . . . **$47.95**



The Sotar 20/20– State-of-the-Art Engineering Produces the Ultimate Airbrush

Engineers at Badger Airbrush Company asked professional modelers and artists to develop their "Wish List" for the ultimate airbrush. Now, after several years of intense product development with these requirements in mind, Badger introduces the Sotar 20/20 – *the* state-of-the-art double-action air brush with these highly advanced design features:

- Laser-engraved line width adjustment ring, with micrometer-type increments of .001 inch for precise, repeatable settings.
- Black-chrome-plated brass body for superior balance, durability and manufacturing accuracy.
- Spring-tempered stainless-steel needle with elongated taper for extremely fine lines.
- Teflon® needle seal that is impervious to most solvents…prevents material back-up.
- Paint tip perfectly centered in the nozzle…important for hairline spraying!
- Special regulator design for proper tip protection.
- Patented, drop-in, recessed and tapered tip assembly, with special hold-down ring to facilitate removal, cleaning and reassembly.
- One-piece trigger for smooth, rolling control of both air and paint action.
- Adjustable trigger spring tension for maximum control.
- Ergonomic shape with both trigger and thumb pads for comfortable grip.
- Lifetime warranty on labor.

So, if you want to do the ultimate airbrushing, then you need to have the ultimate air brush... The Sotar 20/20.

#82382 Sotar 20/20 Airbrush Set includes air brush, extra needle, extra regulator with protective arms, nozzle cap, rubber finger pad, screwdriver, wrench, instructions, and plush-lined wood storage box.
List $395.00 . . . . . Our Price **$245.00**

#82386 Six foot transparent vinyl air hose with drainable moisture trap . . . **$21.95**
#82387 If purchased with Sotar 20/20 . . . . . **$19.95**

The Paasche Airbrush – The Professionals' Choice Since 1904

If you want to use the airbrush used by many master model builders and artists, then you should consider a Paasche model VL. This double-action, internal mix airbrush is extremely well balanced, with a heft and feel unlike any other we've tried. The body is made of machined brass and is bright-chrome-plated. Internal components are made from nickel silver, with stainless steel needles and Teflon packing – high quality materials that last a long, long time. The down-and-back rocking trigger controls both air and paint flow, so you don't have to stop spraying to make adjustments. It's ideal for the blending and fading techniques used to create camouflage, weathering, hot rod designs and other special effects. Can be converted to controls-air-only single-action with just the turn of an adjustment wheel. Complete set includes three nozzles and tips for spraying widths from 1/32" to 1-1/2" wide, braided air hose, 1/4 oz. color cup, 1 oz. and 3 oz. bottle assemblies, 1 oz. paint storage bottle with cap, wrench, airbrush holder, instructions and lesson book.

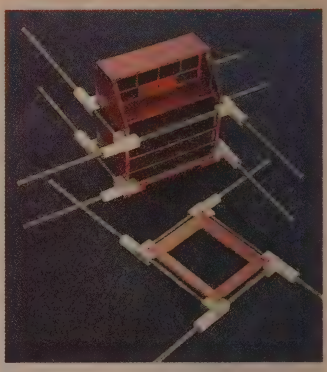
#81019 Paasche model VL Airbrush Set . . . . List $118.95 . . . . Our Price **$99.95**

Micro•Glaze…The Easy Way to Create Realistic Window "Glass"

Our Micro•Glaze liquid window pane material adds that extra touch of realism that you can't get with ordinary sheet plastic. It creates "glass" that is a lot closer to true scale thickness, so reflected light is much more realistic; and if your structure has interior lighting, the effect is even more impressive. To use, dip a toothpick into the glazing liquid, apply around and then across the window opening. When dry, you'll have a rigid film that simulates an ultra-thin, clear pane of "glass." Clearer and more bubble-free than any other brand we've tested. Use for model railroad structures, locomotives, passenger cars, ship model skylights, etc. Works on plastic, metal and wood framed individual panes up to 1/2" x 1". Two 3/4 oz. bottles.

#80894 Micro•Glaze **$5.95**

Miniature 4-Corner Clamps Speed Assembly



Great for clamping miniature picture frames, furniture, model railroad rolling stock and structures, ship models and whenever you need to clamp 4 corners tightly together. They adjust easily to hold items from 1/2" x 1/2" to 4" x 5".

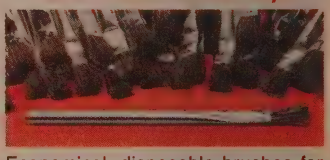
#60716 Miniature
4-Corner Clamp **$9.95**
2 or more **$8.95 ea.**

Model Builder's Bench Top Organizer

This new organizer keeps your model building supplies within easy reach and helps prevent loss of small model parts. It has fourteen 1-5/8" round compartments for holding most brands of model paints and glues, plus 10 additional compartments for holding artist brushes, tools and small parts. The four tier design lets you see everything in plain view...much better than picking up 10 paint bottles to find the one color you need. Made of tough, heavy gauge molded plastic. 9" x 14" x 2-1/2" high.

#80970 Organizer . . . . . List $16.95
Our Price **$12.50**

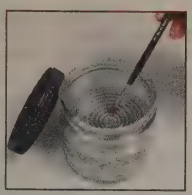
Disposable Brushes for Glue Spreading and Paint Touch-Up



Economical, disposable brushes for spreading epoxy, wood glue, small parts dusting and cleaning, and paint touch-up. Horsehair bristles set in tin handles. 1/2" wide brush. 6" long overall. 48 brushes per package at less than 15 cents per brush!

#15139 Disposable Brushes (48) **$6.95**

Brush Cleaning Tank Helps Prevent Damage to Fine Brush Filaments



Stroking a brush across the smooth surface of the aluminum coil opens and separates the bristles for proper cleaning without damaging the delicate split ends of the brush hairs. Heavy glass tank with specially wound aluminum coil and screw-on lid holds up to 12 oz. of water, solvent or brush cleaning solution.

#81635 Brush Cleaning Tank **$6.25**

Brush Saver Conditions Your Paint Brushes for Long Life

After cleaning your paint brushes, give them the Brush Saver treatment. A final rinse in Brush Saver removes deep down paint particles and leaves the bristles clean, soft and pliable, ready for your next painting session. 4 oz. bottle. (Shipped via UPS ground only).

#81507 Brush Saver **$4.95**

These Brushes Help You to Master the Dry Brushing Technique

Dry brushing is a technique that lightens raised details on a model or miniature figure; for example, rivets, hinges, tank treads and buttons on a coat. By wiping almost all of the paint from a specially shaped brush, just a touch of color is applied to create subtle highlights. This enhances the model's realism and gives it a professional, artistic appearance. Our special brushes are made of the finest Mongolian sable, and have the right texture and shape needed to help you master the dry brushing technique. All brushes are approx. 7" long with lacquered hardwood handles and seamless nickel ferrules.

A. #81078 #8 Dry Brush **$7.75**
B. #81079 #6 Dry Brush **$6.20**
C. #81080 #4 Dry Brush **$5.15**
D. #81081 #2 Dry Brush **$4.55**
#81082 Set of 4 - save 10% . . . **$21.25**

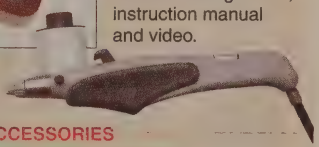
The Aztek Airbrush System

Testor stays on the cutting edge of technology and value with their Aztek airbrush. The great, patented nozzle configuration is the key element that distinguishes this airbrush from all others. Nozzles simply screw into the tough, solvent-resistant acetal body which houses the control mechanism. Disassembly is not required for cleaning. When it's time for a color change, simply spray solvent through the airbrush until it runs clear and load the new color. These are side-feed, double-action airbrushes. Double-action means you control both air volume and paint volume with the finger tip trigger (push down for air; pull back for paint). 7 color-coded nozzle types–fine line, general purpose, medium flow, high flow, spatter, plus two for acrylics–will accommodate all paints and achieve virtually any desired effect. Spray from any angle without spilling–color cups have lids and can be attached to either side of the airbrush. Lifetime guarantee on body.

Aztek Deluxe Airbrush Set

Set includes dual action airbrush (works as either a double or a single-action airbrush) with tactile ergonomic grip, 6 nozzles (fine, general purpose, medium, high flow, acrylic general, and acrylic high flow), 4 color cups, 2 siphon caps (28mm, 33mm) with bottles, hose with air can adapter, wooden storage case, instruction manual and video.

#81710 Aztek Deluxe Airbrush Set
List $169.95 . . . . . Our Price **$129.95**



AZTEK AIRBRUSH ACCESSORIES

(also compatible with Model Master series airbrushes)

#80428 Fine Line Nozzle. **$9.95**
#80603 General Purpose Nozzle . . **$9.95**
#81712 Medium Flow Nozzle **$9.95**
#80429 High Flow Nozzle **$9.95**
#80430 Spatter Nozzle **$9.95**
#82317 Acrylic General Detail Nozzle **$9.95**
#82318 Acrylic High Flow Nozzle . . **$9.95**

#80432 28mm Siphon Cap w/bottle. Lets you mount Polly Scale, Testor Model Master and Floquil paint bottles directly to airbrush **$5.95**

#80761 33mm Siphon Cap w/bottle. Lets you mount MODELflex paint bottles directly to airbrush. **$5.95**

#80431 Large Color Cup **$3.95**

#15190 Air Can Propellant, 15 oz. **$10.55** (Shipped via UPS ground only).

#80433 Air Can Hose Adapter. Lets you use airbrush with air can propellant and adjust flow **$8.95**

Universal Airbrush Cleaning Station

#80601 A unique, convenient, environmentally sound method of cleaning any airbrush. Just insert your airbrush into the adjustable neck and "blow" solvent through brush. Baffles and patented filter collect spray . . List $29.95 . . Our Price **$24.95**

#80602 Extra Filters (3) **$9.95**

Quiet Air Compressor Starts and Stops Automatically

Delivers air at the right pressure for airbrushing. No regulator required!

The Airmaster Plus compressor operates so quietly you'll hardly know it's running. And it runs only when the airbrush trigger is depressed. The durable, molded cabinet features a built-in airbrush holder, a master power switch and a special reservoir that eliminates pulsations. Paint in peace and quiet — order this well-made compressor for your work shop today! Made in USA. Works with any airbrush. Operating pressure: 0.5 cfm @20 psi; low flow pressure up to 50 psi. 9-1/4" x 7-1/2" x 5" high. 110v AC, 1.2 amp. 1/4" air line fitting.

#81748 Airmaster Plus Compressor
List $262.00 . . . . . Our Price **$199.95**

#81768 Hose adapter for Badger 200 airbrush (our #27156) . . . **$3.95**

Hold-It Easy™...The Better Way to Paint Models

Adjustable spring tension holds models gently yet securely without distortion. The soft, no-slip jaw pads grip from the inside so you can paint the entire model by rotating the handle. When you're done painting, just rest the handle on the edge of your workbench or hang from an overhead hook until the paint dries. 12" long handle keeps your hands away from overspray when airbrushing. Adjusts to hold models with inside dimensions from 1/2" to 5". Made of aluminum and steel with neoprene rubber jaw pads.

#80968 Hold-It Easy Handle . . . **$12.95**

Weathering and Antiquing Chemicals for the Most Realistic Models

#60863 WEATHER-IT Ages unpainted wood in seconds. Won't hide details like paint. Not a stain, but a chemical reaction that takes place within the wood itself. Effect can be controlled by repeated applications. Use on model railroads, dioramas, ship models, dollhouse roofing, etc. 4 fl. oz. . . **$6.45**

#60864 BLACKEN-IT Blackens brass, steel, nickel-silver, copper and most metals except aluminum and stainless steel. Will not chip or peel, conducts electricity and is fuel proof. 4 fl. oz. **$6.45**

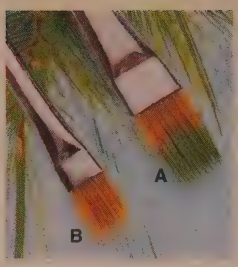
#60865 PATINA-IT Produces shades of blue/green found on weathered copper, brass and bronze. Use on copper clad ship hulls, dollhouse flashing, roofs, etc. 4 fl. oz. Not a paint. **$6.45**

(All above shipped via UPS ground only).

Cotton Gloves Protect Hands and Finishes

Thin, lightweight, disposable cotton gloves let you handle plastic models without fear of contaminating the plastic with fingerprints. Protects both painted and unpainted surfaces. Also ideal for handling metal objects while polishing and for protecting your hands when using epoxy and other adhesives. One size fits all. 24/pkg.

#70221 Cotton Gloves (24) **$9.95**



Golden Eagle Brushes for Special Effects

A & B. "Rake" Brushes. These feathering brushes make special effects with model paint easy. Use for model railroad and architectural landscape backdrops, texturing, miniature furniture antiquing, simulating wood grain, creating rust streaking and weathering on models, decoy feathers, distressing ship models, military model camouflage, doll hair painting and more.

A. #80340 1/2" Flat "Rake" **$6.50**
B. #80341 1/4" Flat "Rake" **$5.50**

C. Fan Brush. Used in similar fashion to "Rake" brushes above, but has fewer filaments spread farther apart. Approx. 7/8" wide. Also good for dusting models and miniatures.

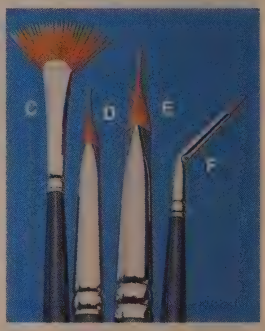
#80934 Size 10/0 Fan Brush **$4.75**

D & E. Miracle Wedge Brushes. Three-sided brushes taper to a point from a triangular ferrule. Paints a straight or curved line from thin to thick depending on pressure applied.

D. #80935 Approx. 1/8" **$6.25**
E. #80936 Approx. 1/4" **$8.10**

F. Tight Spot Brush. Paints where no other brush will fit. Ideal for touch-up after assembly. Size 10/0.

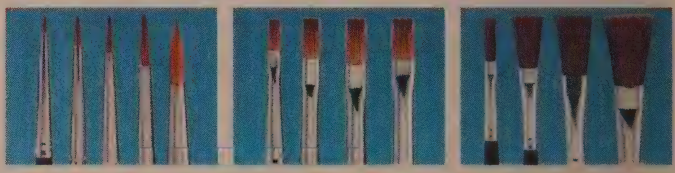
#80937 Tight Spot Brush **$3.25**



#80938 Set of all 6 Special Effect Brushes (Save 15%) **$29.20**

Fine Quality Brushes for Professional Results

These are fine quality hobby/craft brushes. All have seamless nickel ferrules and lacquered hardwood handles.



Red Sable Rounds

Item	Size	Price
#27140	10/0	$4.50
#27141	3/0	$2.75
#27142	0	$2.90
#27143	2	$3.35
#27144	4	$4.20

#27145 Buy all five and save. Set of five. . . **$15.50**

Red Sable Flats

Item	Size	Price
#27146	1	$3.45
#27147	2	$3.75
#27148	3	$4.00
#27149	4	$4.75

#27150 Buy all four and save. Set of four. . . **$13.95**

One-stroke Ox Hair Flats

Item	Size	Price
#27151	1/8"	$2.75
#27152	1/4"	$3.15
#27153	3/8"	$4.10
#27154	1/2"	$4.85

#27155 Buy all four and save. Set of four . . **$12.95**

Use Your Badger Airbrush Straight from the Paint Bottle

Our exclusive adapter lets you connect Floquil, Polly*Scale* and Testor Model Master paint bottles directly to your Paasche double-action or Badger airbrush. Now you don't have to bother with messy transfer of paints to the airbrush bottle. Just screw our special cap/adapter between your paint bottle and airbrush and spray! Also includes approx. 6" of tubing to accommodate various bottle depths.

#60936 Bottle Adapter **$7.50**

Cordless Mixer for Model Paints

Mixes paint in-the-bottle for consistent color every time. Just insert the spin disk and push the button. To clean, spin in a bottle of thinner. Even mixes old, settled paint. Handles bottle depth up to 3". Uses 2 AA batteries (not included).

#80975 Paint Mixer **$9.95**

Tack Cloths Remove Sanding Dust

For a really fine finish, you should remove all traces of sanding dust before painting. Tack cloths make the job easy. Ours are the finest you can buy and contain no oils, silicones or other material that may affect paint adhesion. Price is for twelve 18" x 36" cloths.

#80933 Tack Cloths (12) **$7.95**

Golden Eagle Brushes... Better Than Red Sable

Our Golden Eagle brushes are made exclusively for us in the United States from an ultrathin man-made filament that flows paint on as smooth as silk. They hold their shape better and last longer than any other brush we've tested. They're ideal for lettering, pin striping, fine detail and whenever only the best will do. Golden Eagles will give you outstanding performance whether you use water base, lacquer base or enamel paints. Use on plastics, wood, fiberglass, metal and all other smooth surfaces. Handles are lacquered hardwood with seamless nickel ferrules.

5 3 1 2/0 5/0 — ROUNDS

1 2 3 4 — FLATS

1/2" 3/8" 1/4" 1/8" — ANGULAR

3/0 5/0 10/0 — LINERS

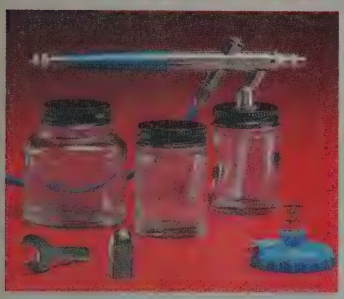
ROUNDS	Size	Price
#60409	5	$5.15
#60410	3	$4.35
#60411	1	$4.10
#60412	2/0	$3.65
#60413	5/0	$3.45
#60432	Set of 5 - save 10%	$18.65

FLATS	Size	Price
#60448	1	$3.45
#60414	2	$3.95
#60415	3	$4.35
#60416	4	$4.75
#60433	Set of 4 - save 10%	$14.85

ANGULAR	Size	Price
#60774	1/2"	$6.45
#60775	3/8"	$5.40
#60776	1/4"	$4.35
#60777	1/8"	$3.70
#60778	Set of 4 - save 10%	$17.90

LINERS	Size	Price
#60779	3/0	$3.70
#60780	5/0	$3.45
#60781	10/0	$3.25
#60782	Set of 3 -save 10%	$9.35

Get Professional Results with this Starter Airbrush Set



Having a good airbrush can mean the difference between a good paint job and a great paint job. If you've never used an airbrush, you'll be amazed at the special effects and smooth coverage it affords. The Badger 200-3 is an all metal, single action, internal mix unit that is so easy to use even beginners can get professional results. Single action means that the trigger controls air flow only. The amount of color and spray width is regulated by turning the needle adjustment screw located at the back of the handle. Internal mix means the air and fluid are combined within the nozzle, providing thorough atomization of the spray and less overspray. This model is also excellent for detail work, with an adjustable spray pattern from 1/16" to 1-1/2" wide. Kit includes airbrush, two 3/4 oz. jars, one 2 oz. jar, protective cap, light weight vinyl air hose, propellant regulator, propellant and instruction booklet. (Airbrush and propellant shipped by UPS ground only).

#27156 Airbrush Kit . . . List $83.00 . . . Our Price **$61.95**
#15190 Extra Airbrush Propellant, 15 oz. **$10.55**

HOSE ADAPTER

Hose adapter for Badger 200 airbrush (our #27156). Connects Badger hose to 1/4".

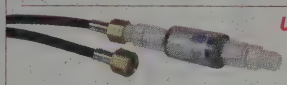
#81768 . . . . . **$3.95**

AIR BRUSH "HOW-TO" BOOK

A step-by-step guide with over 140 color photographs. A must for the first time airbrush user.

#27160 . . . . . **$7.95**

UNIVERSAL MOISTURE TRAP



Fits all airbrush compressors. Includes hose and 1/4" fittings. 42" long overall.

#81782 Moisture Trap . . . . . List $27.95 . . . . Our Price **$24.95**

Portable, Lightweight Air Compressor

Delivers air at the right pressure for airbrushing. No regulator required!

A nicely designed, economical compressor for the serious hobbyist or artist. Features oil-less, maintenance-free, single piston construction that runs smoothly and quietly. Has a pressure relief valve to prevent air build-up when the airbrush is not in use. Maximum pressure: 40 psi. Motor: 1/12 hp., 110v AC. Six foot cord with convenient on/off switch. Includes hose fittings for Badger, Aztek, Model Master, Paasche and many other airbrushes. Made in USA.

#81093 Compressor . . . . . List $149.95 . . . . Our Price **$119.95**

See pg. 55 for information on the Airmaster Plus Air Compressor.

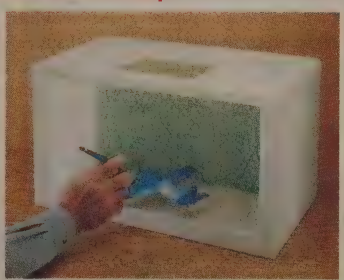
In-Jar Paint Filter Prevents Airbrush Clogging

This micro-mesh filter screen fits inside the jar of Badger and Paasche airbrushes. It keeps particles and blobs of paint from entering the siphon tube and clogging the nozzle. To clean, simply rinse with solvent or water. Note: Will not fit Aztek or Modelmaster airbrush jars/siphon caps.

#82109 In-Jar Paint Filter **$5.95**
2 or more $4.95 ea.

Badger's Spray Booth Protects Your Lungs and Your Shop

Now you can avoid breathing dangerous paint fumes when using your airbrush and paint spray cans. And your finished projects and surroundings will be protected from overspray. A powerful 110v AC, 3100 rpm blower sucks fumes from inside the booth, through a filter and then blows them outside your workroom through a standard 4" clothes dryer vent hose (available at any hardware store). Made of sturdy translucent polypropylene with an 8" x 5" plexi-glass window in the top to allow even more light to enter. Large size (20" long, 12" high and 12" deep) will accommodate most scale model projects. (Shipped to continental US only).



#60463 Badger Spray Booth
List $282.00 . . . . . Our Price **$219.95**

#60484 Replacement Filters.
2/pkg . . . . . **$9.95/pkg.**

"Age-It EASY" Makes New Wood Look Years Older in Seconds

A Micro-Mark **Exclusive!**

Age-It EASY is the ready-to-use solution for recreating the weathered appearance of wood that has seen the ravages of time and the elements. It's alcohol based, so it penetrates deeply into the wood and won't cause severe warpage the way water-based treatments can. Use it on piers, trestles, siding, roofs, structures, rolling stock, ship models, shingles and anywhere you want new wood to have a rough, weather-beaten appearance. 3-1/2 oz. bottle. (Shipped via UPS ground only).

#80873 Age-It-EASY Gray . . **$6.50** **#81528** Age-It-EASY Brown . . **$6.50**

Railroad Tie and Bridge Stain

Creosote-treated timber, like that used for railroad ties and bridges, takes on a gray-brown color after being exposed to the elements. Our custom blend of colors realistically reproduces this effect. Simply apply by brush or by dipping. 3-1/2 fl. oz. bottle.

#81721 Railroad Tie and Bridge Stain **$6.50**
(Shipped via UPS ground only). 2 or more **$5.50 ea.**

Weathering Pastels for the Ultimate in Realism

The realistic model railroads, ship models and dioramas featured in magazines almost always have a weathered, worn look, the way they would appear in real life. One way to get this look is with weathering pastels. Just apply the pastels the way they come or use the optional "sponge" applicator sold below for lighter, more subtle tones. Use on hulls, buildings, rolling stock, scenery, armor, decks, deck houses, etc. Create a dirty, rusty, aged, smoke and weather-stained appearance easily. Each pastel stick is approx. 3/8" x 3/8" x 2-1/2". Sets include 12 sticks of assorted colors.

#60762 Earth Tone Pastels . . **$12.95**

#60763 Gray Tone Pastels . . . **$12.95**

#60764 Sponge Applicator. **$3.50**

#82463 Spray Fixative (not shown). A clear, flat coating keeps pastels from rubbing off during handling. 3 oz. spray can. (Shipped by UPS ground only). **$3.29**

#82465 Set of all 4 items, ***save 10%*** (Shipped by UPS ground only). **$29.45**

Mini Sandblast Gun Removes Paint and Etches Wood, Metal, Glass

Now you can remove old paint and rust in minutes! And the blasted sand (actually micro-size aluminum oxide grains) gets into grooves and recesses impossible to reach with any other method. It will also distress wood for an aged look and engraves glass when used with a stencil. And because the grains of abrasive are so fine, it will remove paint without removing surface details...even on plastic. Excellent for restoring miniature plastic and metal collector models and toys. Operates from propellant can included or from any tank or tankless compressor capable of producing 30 psi. Set includes sandblast gun, 4 oz. jar, 8 ft. air hose, 12 ozs. of reusable 220 grit alum. oxide abrasive, propellant, brass adapter for compressor use, air mask and instructions. (Shipped via UPS ground only).

#60287 Mini Sandblast Gun . . . **$42.95**

#15190 Extra Propellant, 15 oz. **$10.55**

#60289 Sandblast Gun Abrasive, 5 lbs. **$21.50**

#60290 Replacement Tip. **$4.95**

Avoid the Mess of Spilled Liquids with this Mini Funnel Set

Most plastic funnels are made for kitchen use and will melt if used with any solvent. These are made of polyethylene so they won't be attacked by paint, thinners, liquid plastic cement or most other adhesives. Great for filling those little air brush bottles and glue syringes. 4 piece set includes two 2" dia. with 1/4" neck and two 1" dia. with 3/8" neck. All have hang-up holes.

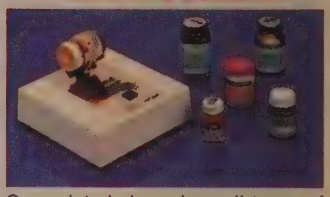
#60392 Mini Funnel Set (4) **$4.95**

The "RINSE WELL"... It's Like Having a Sink on Your Workbench

The "Rinse Well" keeps you supplied with clean rinse water when brush painting with water-based paint. Just rinse your brush in the well. Then press the button and the dirty rinse water drains into the base while the well automatically refills with clean water. Saves time and eliminates the mess of filling and refilling several rinse containers. 7" diameter base; 20 oz. bottle capacity.

#81415 Rinse Well. **$16.95**

Mix Art and Hobby Paint with the Push of a Button!

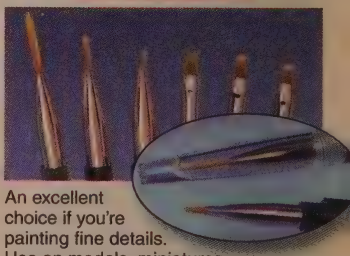


Our paint shaker mixes all types of paints better and more thoroughly than you can with a stick or hand-shaking. Accommodates all small art and hobby size bottles and cans up to 1 oz.

#27162 Paint Shaker, 110v AC. . . **$34.95**

#27161 Battery Powered Paint Shaker (requires 4 "D" batteries not included). **$24.95**

Golden Eagle™ Ultra Detailers



An excellent choice if you're painting fine details. Use on models, miniatures, duck decoys, ceramics and anytime you need precise control of paint application. Made for us in the USA of ultra fine golden eagle filament. Six piece set includes 10/0 round, 10/0 short liner, 10/0 long liner, 1/16" micro flat, 1/16" micro angular, 1/16" micro filbert. Each brush features a screw-on clear plastic cap for protection and easy selection. Aluminum ferrules with plastic handles. Approx. 4-1/2" long.

#81077 6 Pc. Ultra Detailer Set
Retail $32.95 . . . . . Our Price **$24.75**

MicroLux Spray Booths Eliminate the Mess and Hazard of Spraying Paint

5 Year Warranty!

NEW!

MicroLux spray booths eliminate the hazards of spraying paint in confined areas. Inside the base of the downdraft-style booth is a powerful, brushless exhaust fan which draws paint overspray from inside the durable metal hood and passes it through a three-stage filter which removes pigment particles and solvent vapors, then vents the cleaned air outside the work area. The clear window which forms the top of the hood lets room light in, and can be easily fitted with an under-the-cabinet type fluorescent fixture for additional light (not included, but available at any home center). Includes 4" diameter exhaust ports (for connection to metal-type clothes dryer ducts), on-off switch for fan, holes for hanging up parts, and filters. All metal construction. Hood requires a few minutes of assembly. 110vAC. Made in the USA for Micro-Mark by Artograph. (Shipped to 48 contiguous United States only)

15" x 20" Standard Spray Booth

#82427 Has interior dimensions of 15" deep x 20" long x 12" high. Single 185 CFM fan directs air flow out the back of the base. Overall height: 21".

List $449.95 . . . . Our Price **$295.95**

Filters and Accessories for 15" x 20" Standard Spray Booth

#82150 1st stage filters (15" x 20") package of 5. . . . . **$5.50**
#82410 2nd/3rd stage filter set (15" x 20") **$13.95**
#82428 Roll filter tray (20") . . **$28.95**
#82429 1st stage Filter roll (20" x 1800"; makes 120 filters) **$49.95**
#82435 Replacement acrylic window for standard spray booth **$12.95**

15" x 30" Large Spray Booth

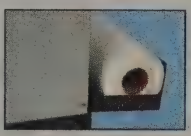
#82430 Has interior dimensions of 15" deep x 30" long x 12" high. Dual 185 CFM fans (370 total CFM) directs air flow out dual exhaust ports located on side of the base (left/right reversible). Overall height: 22".

List $649.95 . . . . Our Price **$429.95**

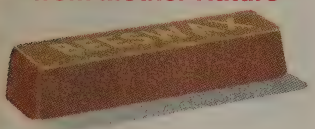
Filters and Accessories for 15" x 30" Large Spray Booth

#82433 1st stage filters (15" x 30") package of 5. . . . . **$8.50**
#82434 2nd/3rd stage filter set (15" x 30") **$18.95**
#82431 Roll filter tray (30") . . **$37.95**
#82432 1st stage Filter roll (30" x 1800"; makes 120 filters) **$74.95**
#82436 Replacement acrylic window for large spray booth. **$15.95**

Optional Roll Filter Tray slips into back of base to hold filter rolls. Filter material passes through slot provided in back of hood.



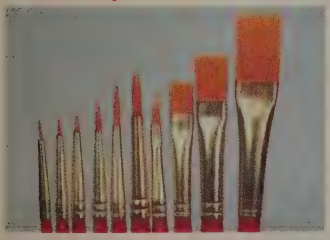
Beeswax...The Multi-Purpose Tool from Mother Nature



Use beeswax for eliminating the fuzz on ship model rigging thread. Just pull the thread past the side of the bar. Your rigging will look more realistic and won't attract dust. Also used to lubricate rotary cutting bits and jeweler's saw blades when cutting metal. Three 1 oz. bars.

#80587 Beeswax **$4.95**

Fine Nylon Brush Set



Moderately priced craftsman brushes apply smooth finishes with either solvent or water based colors. Made with shed-proof nylon bristles, seamless ferrules and wooden handles

#81767 10-pc set includes rounds #3/0, #2/0, #0, #1, #3, #5, shaders #2, #6, #10, and fine glaze #5/8 . . **$15.95**

Ultrasonics – The Fast, Easy Way to Clean Small Parts

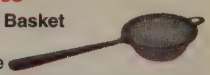
NEW!

This is a true ultrasonic cleaner that uses energy in the form of sound waves to create literally millions of tiny, microscopic bubbles in the cleaning solution. These bubbles expand and collapse 46,000 times a second to create a mechanical "scrubbing" action that works its way into the smallest holes and hidden cavities, loosening and washing away dirt and grease from all surfaces that the solution touches. Includes a 2" deep, 3-1/2" x 6-1/2" stainless steel tank, parts basket, automatic shut-off and plastic cover. Ideal for cleaning airbrushes, model railroad components, R/C engines, instrument and clock parts, coins, eyeglasses and jewelry. Plugs into standard 110v AC household outlet. Power consumption: 50w. For best results, use with cleaning solutions sold below (not for use with volatile solvents).

#82413 Ultrasonic Cleaner . . . . . List $99.95 . . . . . Our Price **$79.95**

Ultrasonic Cleaner Accessories

Stainless Steel Cleaning Basket



Bend the handle of this cleaning basket into the shape you need to hang on the side of your ultrasonic cleaner or other dipping tank. Keeps small parts accessible and prevents their loss. 6-3/4" long with 2" diameter basket and a hang-up hook.

#81846 Cleaning Basket . . **$4.95**
2 or more **$3.95 ea.**

Concentrated Cleaning Solution

Advanced technology, non-hazardous cleaning solution removes oil, debris and grime from model parts and mechanisms. Completely safe, fast and easy to use on all materials.

#81870 Half-pint bottle (makes 2 gallons of working solution) **$4.95**
#81871 Quart bottle (makes 8 gallons of working solution) . . . **$14.95**

PACER TECHNOLOGIES

Specialty Adhesives and Preparations

CYANOACRYLATES

INSTANT GLUES THAT CUT ASSEMBLY TIME FROM HOURS TO MINUTES

Quick Cure Zap. Thin consistency flows into the tightest joints and cures in 1-5 seconds. Can actually be applied after parts are clamped together. Penetrating action acts as a sealer on wood. Bonds metal, plastic, wood, glass, jewelry.

#80875 1 oz. applicator bottle **$6.99**
#80876 2 oz. applicator bottle . . . **$11.50**

Mid Cure Zap-A-Gap. Best for general purpose construction and assembly. Thicker consistency fills minor gaps and irregularities. Cures in 20 seconds. Preferred over Quick Cure for bonding wood.

#80877 1 oz. applicator bottle **$6.99**
#80878 2 oz. applicator bottle **$11.50**

Slow Cure Slo-Zap. Extra thick consistency fills larger gaps and irregularities and forms fillets on models. Slow, 90 second cure allows positioning time. Recommended for laminating, sheeting and other large surface applications. Spreads easily. Preferred for use on balsa, basswood and other porous woods.

#80879 1 oz. applicator bottle **$6.99**
#80880 2 oz. applicator bottle . . . **$12.90**

Poly-Zap. For use on Lexan, Delrin, polycarbonate, nylon, rubber and other space-age plastics. 15 to 30 second cure.

#80882 1/2 oz. applicator bottle . . . **$5.50**

Plasti-Zap. Best for assembling plastic model kits. Cuts through plastic mold release agents and will not chemically attack or soften plastic parts. Can be removed from plastic parts with Debonder. 15 to 30 second cure.

#80881 1/3 oz. applicator bottle . . . **$3.79**

Flex-Zap. A flexible CA with more shear and shock strength for high stress areas. Works best on hard surface materials like carbon fiber, fiberglass, plywood, etc. 60 second cure.

#80883 1 oz. applicator bottle **$7.90**

Zip Kicker. Instant glue accelerator. After applying instant glue to the joint, give it a light spray from the pump bottle and the glue will set up instantly. Also excellent for bridging gaps in bad fitting joints and for end grain gluing. Safe for plastics.

#80884 2 oz. pump sprayer **$5.90**
#80885 Zip Kicker 8 oz. refill **$9.90**
(Shipped by UPS ground only).

Z-7 Debonder. Dissolves all brands of cyanoacrylate adhesives. Removes residues from hands, tools, clothing, workbenches, etc. Will not attack plastics. 1 oz. bottle.

#80887 1 oz. applicator bottle **$3.90**
(Shipped via UPS ground only).

EPOXY

2-PART HIGH STRENGTH ADHESIVES THAT BOND ALMOST ANY MATERIAL

5 Minute Quick Cure Z-Poxy. Two part system. Mix equal quantities of A & B. Use when quick cure time is more critical than strength. For stronger joints or larger surfaces use 30 minute cure. 8 fluid oz. total.

#80888 Two bottles **$13.99**

30 Minute Mid Cure Z-Poxy. Two part system. Mix equal quantities of A & B. Use when maximum strength is required or when bond areas are sizeable and application time is needed to distribute the adhesive. 8 fluid oz. total.

#80889 Two bottles. **$13.99**

ACCESSORIES AND SPECIAL PRODUCTS

Z-Ends. Extender tips for precise control of adhesive placement. Fits all Pacer cyanoacrylate bottles. Set includes ten tips for slow and mid-cure; 12" of Teflon tubing for quick-cure.

#80890 Z-End Extender tips **$3.60**

Zap-A-Dap-A-Goo. An all-purpose adhesive and sealant. Not a super glue. Bonds virtually anything to anything. Gooey, strong, clear and remains flexible. For porous and non-porous surfaces.

#80891 3 oz. tube **$4.95**

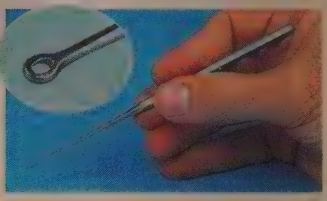
Microbrushes – Disposable Applicators for Exact Placement of Paint, Glue and More

Use a Microbrush to apply a tiny amount of liquid adhesive, paint or lubricant (as little as one-eighth of a drop!) exactly where you want it without spilling, dripping or staining. Microbrush tips are non-linting and non-absorbent, and feature bendable handles that let you reach hard-to-get-at areas easily. Sold in packs of 30.

#81754-R Regular Microbrushes (30) **$3.50** . . . 3 or more **$3.15 ea.**
#81754-F Fine Microbrushes (30) **$3.50** . . . . . 3 or more **$3.15 ea.**
81754-SF Super Fine Microbrushes (30) **$3.50** . . 3 or more **$3.15 ea.**

Applicators Control Excess Glue and Eliminate Accelerator Overspray

Capillary action can draw glue out of a dispensing bottle and cause it to run into unwanted areas. Our applicators control excess glue by holding just a small amount at the tip. Simply touch the tip to the object to transfer the glue. Also applies accelerator without messy sprays and harmful vapors.



#81669 Mini Glue Applicator. Holds single drop of glue or accelerator in the loop at its tip. All Stainless-steel. Approx. 6" long **$6.95**

#82448 Micro Glue Applicator. Holds miniscule drop of glue or accelerator in the forked stainless-steel tip. Nickel ferrule and wood handle. 7" long . . . **$6.95**

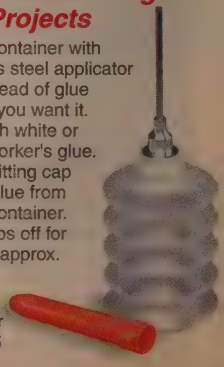
Zap Gel Stays Where You Put It

The extra thick consistency of new Zap Gel keeps it from dripping or running. And it fills gaps in joints like no other super glue. Cures in 15 seconds.

#81637
Zap Gel
(set of three 3-gram tubes). **$5.95**

Applicator Places a Fine Bead of Glue on Your Woodworking Projects

Bellows type container with 1-3/8" stainless steel applicator places a fine bead of glue exactly where you want it. Works best with white or yellow wood-worker's glue. Includes tight fitting cap that prevents glue from curing inside container. Applicator snaps off for refilling. Holds approx. 1 oz. of glue.



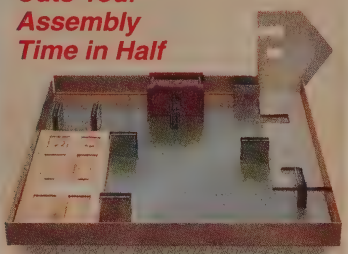
#60363
Glue Applicator
(2) **$4.95**

A Clever Dispenser for Pin Point Application of Glue

Place a drop of glue in the mini-cup. Then dip a toothpick or micro brush in the cup to pick up and place a pin point size dab of glue. The V-groove holds applicators of varying sizes and the weighted metal base prevents tip-over. Use with any glue, including plastic cement and super glue. Includes 250 toothpicks & 20 mini-cups. 1-1/4" diameter. Order today and avoid the mess and waste of over-gluing!

#82031 Glue Dispenser **$9.95**
#82032 Extra Mini-Cups (20) . . . **$1.95**

Magnetic Gluing Jig Cuts Your Assembly Time in Half



A "why-didn't-I-think-of-that" tool for quick assembly of miniature components. Use for dollhouse furniture, miniature picture frames, model railroad structures and rolling stock, ship model deck houses and more. 10-1/4" x 10-1/4", 21 gauge steel plate with 7/8" flanges bent up at 90°. Includes 8 magnetic holding plates that keep components squarely together while glue dries.

#60304 Magnetic Gluing Jig . . . **$26.95**
#60305 Extra Magnetic Plates (8) **$9.95**

Solid Brass Miniature Bar Clamps

The best clamps you can own for clamping small wooden boxes, dollhouse miniatures, model railroad structures and rolling stock, ship models, model airplanes, clock kits, etc. Beautifully made of solid brass at an unbeatable price.

#14256 12" long bar clamps, approx. 10-1/2" clamping capacity. Set of 2 . . . . . **$13.95**

#60103 7" long bar clamps, approx. 6" clamping capacity. Set of 2 . . . **$12.95**

#14257 4-3/4" long bar clamps, approx. 3-3/4" clamping capacity. Set of 2 . . . . **$10.95**

#60396 Ultra-mini brass bar clamps with knurled tightening screws for delicate control. 3-3/4" long, approximately 3" clamping capacity. Set of 2 . . . . . **$9.95**

"Touch-N-Flow" Precision Applicator for Glue and Accelerator

The Touch-N-Flow Applicator lets you apply just the amount of liquid plastic glue or C/A accelerator you need. How it works: Capillary action draws liquid into the glass tube. Touching the micro-tip to the joint causes the liquid to flow from the tube. Application is easily controlled and precisely positioned.

#81778 Touch-N-Flow Applicator . . **$6.25**

Watch Crystal Cement for Clear Plastic

This special cement with needle point applicator is ideal for cementing clear plastic canopies and windshields on airplane and car models. It's also ideal for plastic "glass" on dollhouses and miniature furniture. Can also be used on many other model assembly projects. Cement dries crystal clear and won't attack plastic. Uncured cement cleans up easily with ordinary rubbing alcohol. Special needle point applicator tip makes precise placement easy. Wire-in-cap keeps applicator free flowing. Cures to the touch in 15 minutes. Two 1/3 oz. tubes. (Shipped via UPS ground only).

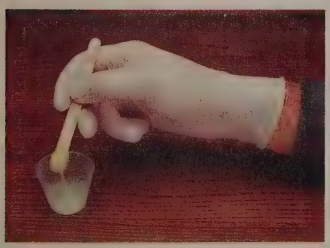
#80343 Crystal Cement **$7.95**

Magnetic Gluing Jig for Long, Narrow Projects

This 6" x 24" jig is ideal for assembly of ship models, airplane fuselages, wings and other long projects. For even more capacity, you can use 2 or more plates placed end-to-end or side-to-side. Set includes 6" x 24", 21 gauge, rust resistant flat steel plate and eight magnetic holding plates.

#70223 6" x 24" Gluing Jig **$19.95**
2 or more, **$17.95 each**
#60305 Extra Magnetic Plates (8) **$9.95**

Latex Gloves for Working with Liquid Resin, Epoxy and Paint

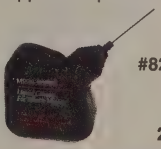


Protect your hands from harsh chemicals and unsightly paint and resins with these gloves. Not the thin, skimpy gloves sold in hardware stores–they're tough so they won't tear, yet thin enough so you can handle small objects without reduction of tactile sensitivity. They also have a thin talcum powder coating on the inside for easy on and off. Excellent for household use as well. Fits any size, left or right.

#81781 Latex Gloves (100) . . . **$12.95**

The World's Most Popular Plastic Model Cement

Testors Liquid Cement for Plastic Models is the best selling cement of its kind. It's quick drying...bonds in just 10 seconds and achieves full strength in 2 hours. Run-proof consistency and needlepoint applicator places cement only where you want it. Use on all plastic models.



#82219 Liquid Cement for Plastic Models (1 fl oz). . . . **$4.50**
2 or more $3.95 ea.
Shipped by UPS ground only.

Syringes for Fine Line Placement of Glues and Lubricants

The usual wood glue containers and grease pumps are okay for large projects, but if you're working small, there's nothing better for precise application. Thin, tapered nozzle will apply a pencil-thin line of adhesive or thick lubricant exactly where you want it. Set of 3: 1/4 oz., 1/2 oz. and 3/4 oz.

#13106 Syringe Set **$6.50**

MICRO-MARK Miniature Lumber Yard

All Micro-Mark miniature lumber is clear, kiln-dried No.1 grade. Wood sheets are micro-sanded both sides. Siding and moldings are precision milled and require no sanding. For cutting sheet stock into narrow strips we recommend table saw #50304 for thicknesses up to 1/4". For thicker sizes and plywood use the MicroLux Tilting Arbor Table Saw, #80463.

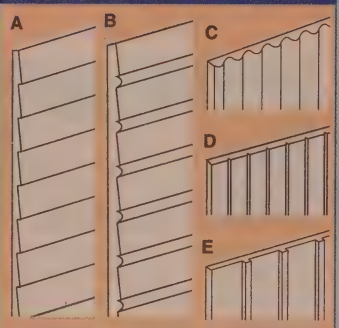
BIRCH PLYWOOD 1ST QUALITY AIRCRAFT GRADE - GOOD 2 SIDES

Thick.	Item#	Price 6" W. x 12" L.	Item#	Price 12" W. x 24" L.
1/64"	50186	3.35	50193	10.55
1/32"	50187	2.50	50194	6.95
1/16"	50188	2.60	50195	7.25
3/32"	50189	3.30	50196	10.25
1/8"	50190	3.40	50197	10.60
3/16"	50191	3.65	50198	11.60
1/4"	50192	3.95	50199	11.95

MILLED BASSWOOD SIDING

3 1/2" W. x 24" L. x 1/16" THICK

Use for dollhouses, model railroads, ship models, architectural models, dioramas and more.



ITEM NO.	SPACING	PRICE/PIECE
A.	**CLAPBOARD**	
60796	1/32"	2.65
60797	1/16"	2.65
60798	3/32"	2.65
60799	1/8"	2.65
60800	3/16"	2.65
60801	1/4"	2.65
60802	3/8"	2.65
60803	1/2"	2.65
B.	**BEADED CLAPBOARD**	
60804	3/8"	2.65
60805	1/2"	2.65
C.	**CORRUGATED SIDING/ROOFING**	
60806	.040"	2.65
60807	1/16"	2.65
60808	3/32"	2.65
60809	1/8"	2.65
D.	**SCRIBED SHEATHING**	
60810	.025"	2.65
60811	1/32"	2.65
60812	.040"	2.65
60813	3/64"	2.65
60814	1/16"	2.65
60815	3/32"	2.65
60816	1/8"	2.65
60817	3/16"	2.65
60818	1/4"	2.65
60819	3/8"	2.65
60820	1/2"	2.65
E.	**BOARD and BATTEN**	
60821	1/16"	2.65
60822	3/32"	2.65
60823	1/8"	2.65
60824	3/16"	2.65
60825	1/4"	2.65
60826	3/8"	2.65
60827	1/2"	2.65
60828	3/4"	2.65

HARDWOOD SHEETS – ALL 24" LONG – PRICE IS PER PIECE

BASSWOOD IS 4" WIDE. MAHOGANY, CHERRY & WALNUT ARE 3" WIDE.

Thick.	BASSWOOD Item#	Price	WALNUT Item#	Price	MAHOGANY Item#	Price	CHERRY Item#	Price
1/32"	50101	2.00	60685	2.95	82263	3.55	81673	3.45
1/16"	50102	2.60	60686	3.45	82264	4.40	81674	3.85
3/32"	50103	2.85	60687	3.70	82265	4.80	81675	4.65
1/8"	50104	3.15	60688	4.20	82266	5.30	81676	5.50
3/16"	50105	3.40	60689	4.65	82267	6.20	81677	5.80
1/4"	50106	4.00	60690	5.20	82268	6.80	81678	6.80
5/16"	50107	4.50						
3/8"	50108	5.00						
1/2"	50109	5.15						
3/4"	50110	5.45						
1"	50111	6.00						
2"	50112	11.50						

MIDWEST MICRO-CUT BALSA SHEETS - ALL 36" LONG

Size	Item #	Price	Size	Item #	Price	Size	Item #	Price
.040" x 3"	80446	6.10 (4)	1/16" x 6"	80451	7.70 (2)	3/16" x 4"	80456	7.55 (2)
.040" x 4"	80447	9.40 (4)	1/8" x 3"	80452	8.35 (4)	1/4" x 3"	80457	6.45 (2)
.040" x 6"	80448	7.55 (2)	1/8" x 4"	80453	6.00 (2)	1/4" x 4"	80458	9.10 (2)
1/16" x 3"	80449	6.10 (4)	1/8" x 6"	80454	10.60 (2)	1/2" x 3"	80459	6.00 (1)
1/16" x 4"	80450	9.40 (4)	3/16" x 3"	80455	10.75 (4)	1/2" x 4"	80460	7.60 (1)

Numbers in parentheses indicate number of pieces per package

HARDWOOD DOWELS

#50200	.085" dia.(1/16" nominal) x 12" long, 10 pieces	1.50
#80078	1/8" dia. x 18" long, 10 pieces	1.95
#80079	3/16" dia. x 18" long, 10 pieces	2.25
#80080	1/4" dia. x 18" long, 10 pieces	2.50
#80081	3/8" dia x 18" long, 10 pieces	3.25

MINIATURE DOLLHOUSE MOLDINGS (1/12 SCALE)

24" LONG BASSWOOD

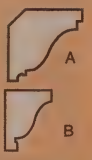
Size indicated is dimension at widest point. Price shown is for 2 pieces, except Stair/Porch Rail & Corner Trim which are priced per piece. Illustrations are approximately actual size.

BASEBOARD

Item#	Size	Price/2
A. 60829	1/2"	2.75
B. 60830	1/2"	2.75
C. 60831	1/2"	2.75
D. 60832	1/2"	2.75

CEILING CORNICE

Item#	Size	Price/2
A. 60833	1/2"	2.75
B. 60834	5/16"	2.20



WINDOW/DOOR TRIM

Item#	Size	Price/2
A. 60835	1/4"	2.55
B. 60836	3/8"	2.55
C. 60837	3/8"	2.55

CHAIR RAIL

Item#	Size	Price/2
A. 60838	1/4"	2.10
B. 60839	1/4"	2.10
C. 60840	3/16"	2.00

CORNER TRIM

Item#	Size	Price/1
60855	3/8"	2.10
60856	1/2"	2.25

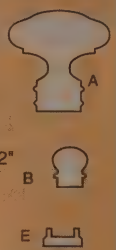
PICTURE FRAME & MISC. TRIM

	Item#	Size	Price/2
A.	60841	3/16	2.00
B.	60842	1/4"	2.15
C.	60843	3/16"	2.00
D.	60844	1/4"	2.15
E.	60845	3/16"	2.00
F.	60846	3/16"	2.00
G.	60847	1/8"	1.90
H.	60848	1/4"	2.15
I.	60849	3/16"	2.00

STAIR/PORCH RAIL

Item#	Size	Price/1
A. 60850	1/2"	1.85
B. 60851	1/4"	1.15
C. 60852	5/16"	1.55
D. 60853	9/32"	1.40
E. 60854	1/4"	1.05

Slots in C, D, & E are 5/32"



PRECISION MILLED BASSWOOD STRIPS ALL 24" LONG

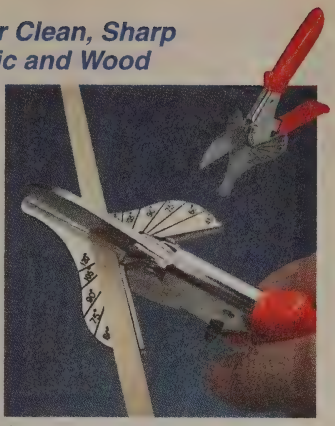
Size	Item #	Pcs./ Pkg.	Price/ Pkg.
1/32" x 1/32"	80001	10	2.30
1/32" x 1/16"	80002	10	2.30
1/32" x 3/32"	80003	10	2.75
1/32" x 1/8"	80004	10	2.75
1/32" x 5/32"	80005	10	3.10
1/32" x 3/16"	80006	10	3.10
1/32" x 1/4"	80007	10	3.70
1/32" x 5/16"	80008	10	4.05
1/32" x 3/8"	80009	10	5.65
1/32" x 1/2"	80010	10	6.35
1/32" x 3/4"	80011	10	6.40
1/32" x 1"	80012	5	3.80
1/32" x 2"	80013	5	6.75
1/16" x 1/16"	80014	10	3.10
1/16" x 3/32"	80015	10	3.10
1/16" x 1/8"	80016	10	3.70
1/16" x 5/32"	80017	10	3.70
1/16" x 3/16"	80018	10	4.05
1/16" x 1/4"	80019	10	5.10
1/16" x 5/16"	80020	10	5.10
1/16" x 3/8"	80021	10	6.40
1/16" x 1/2"	80022	10	7.20
1/16" x 3/4"	80023	10	8.45
1/16" x 1"	80024	5	5.25
1/16" x 2"	80025	5	8.65
3/32" x 3/32"	80026	10	3.70
3/32" x 1/8"	80027	10	3.70
3/32" x 5/32"	80028	10	3.70
3/32" x 3/16	80029	10	4.05
3/32" x 1/4"	80030	10	5.10
3/32" x 5/16"	80031	10	5.70
3/32" x 3/8"	80032	10	7.20
3/32" x 1/2"	80033	10	7.90
3/32" x 3/4"	80034	10	8.60
3/32" x 1"	80035	5	5.20
3/32" x 2"	80036	5	8.85
1/8" x 1/8"	80037	10	3.70
1/8" x 5/32"	80038	10	4.60
1/8" x 3/16"	80039	10	4.85
1/8" x 1/4"	80040	10	5.65
1/8" x 5/16"	80041	10	5.70
1/8" x 3/8"	80042	10	7.20
1/8" x 1/2"	81287	10	9.25
1/8" x 3/4"	81288	10	10.90
1/8" x 1"	80045	5	6.05
1/8" x 2"	81289	5	9.80
3/16" x 3/16"	81290	5	3.05
3/16" x 1/4"	81291	5	3.40
3/16" x 5/16"	81292	5	3.85
3/16" x 3/8"	81293	5	4.85
3/16" x 1/2"	80051	5	5.30
3/16" x 3/4"	80052	5	6.00
1/4" x 1/4"	80055	5	3.85
1/4" x 5/16"	80056	5	3.85
1/4" x 3/8"	80057	5	5.20
1/4" x 1/2"	80058	5	5.95
1/4" x 3/4"	80059	5	6.45
1/4" x 1"	81294	2	3.40
1/4" x 2"	81295	2	5.30
3/8" x 3/8"	80062	5	6.05
3/8" x 1/2"	80063	5	6.45
1/2" x 1/2"	81296	2	2.85
1/2" x 3/4"	81297	2	3.05

SHIP MODEL DECK SHEETS

Individual Basswood Strips glued-up with black glue to simulate caulking. Very realistic and a great time saver. 3" x 22" x .050" thick.

Item#	Plank width	Price
60857	1/16"	8.25
60858	3/32"	6.95
60859	1/8"	6.95
60860	3/16"	6.95

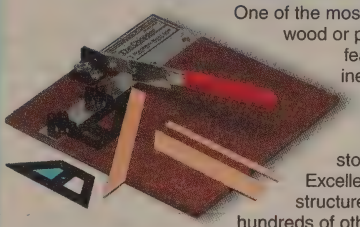
Miter Master! For Clean, Sharp Miters in Plastic and Wood



An excellent tool for ship modelers, miniaturists, airplane modelers, model railroaders and picture framers! Cuts miniature molding, model railroad timbers, dowels, plastic and wood structural shapes, strip stock, ship model planking, even full size picture frame molding, and it can also cut your assembly time in half. Razor sharp blade cuts across the grain with a clean, smooth shaving action and it's as easy to use as a pair of scissors! Has left and right hand, 45° miter fence and scored marks for lining up stock for other angles. Precision made nickel-plated steel handles and aluminum alloy anvil. Will cut stock up to 1/2" thick x 1-1/2" wide. An industrial quality tool originally made to cut automobile interior trim.

#50348 Miter Master . . . . . **$19.95** **#50349** Replacement Blade **$5.95**

The "Chopper" Makes Accurate Miter Cuts Easy



One of the most useful tools for the hobbyist working in wood or plastic strip material. Makes clean, neat, feather-free and accurate cuts, easily and inexpensively. Uses readily available single edge razor blades. Perfect miter cuts are a breeze with the 30, 45 and 60 degree guides included. An adjustable stop permits the exact duplication of pieces. Excellent for model ship planking, model railroad structures, dollhouse furniture and molding plus hundreds of other uses. Comes completely assembled with three extra blades. Base is 7-1/2" x 7-1/2". Cuts material up to 3/32" thick.

#20131 The Chopper **$24.95**

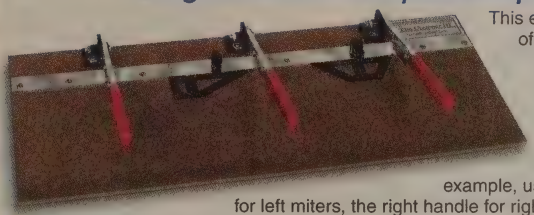
The Heavy-Duty Chopper II — Specially Made for The Serious Craftsman

This heavy-duty craftsman version of the popular Chopper has a machined die-cast aluminum frame and high-precision handle pivot system that maintains a high degree of accuracy and repeatability over many years of heavy use. Includes cast-in ruler along the fence, cast-in angle guides, replaceable cutting mat and two angle gauges. Heavy duty, but compact...takes up only 7-1/2" x 7-1/2" of your valuable workbench space. Cuts material up to 3/32" thick. Uses standard single-edge razor blades sold below.

#82439 Chopper II **$39.95**

#82442 Replacement 4" x 4" cutting mat **$3.95**

Chopper III Accommodates Long Stock and Multiple Set-Ups



This extra-long version of the Chopper lets you mount up to 3 cutting handles on its base so you can have 3 set-ups ready to use. For example, use the left handle for left miters, the right handle for right miters, and the center handle for 90° cross cuts. Now you don't have to waste time changing your set-up after each cut. With just one handle mounted, the Chopper III increases cutting capacity. With three handles mounted, it becomes a time-saving new tool! Cuts material up to 3/32" thick.

#81638 Chopper III. . . includes 18" long base, one handle assembly and one set of cutting gauges. Order extra handles and gauges below. **$34.95**

Chopper Accessories...

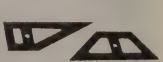
#14292 Pkg. of 100 Blades **$10.95**

#81639 Extra Handle Assembly* **$11.95**

#81780 Extra Gauge Clamps (4)* **$4.95**

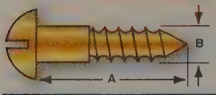
**not for Chopper II*

#81640 Extra Gauge Set. Includes one 30°/90° gauge and one 45°/60° gauge **$2.50**



#80798 12" long x 3/4" wide self-stick centering rule. Use on the Chopper, Miter-Rite and other left/right cutting tools. 1/32" and 1mm divisions. **$3.95**

Solid Brass Miniature Wood Screws



Price is for 40 pieces.

	SIZE	A	B	PRICE
#60741	#0	1/4"	.060"	$2.75
#60742	#0	3/8"	.060"	$2.75
#60743	#1	1/4"	.073"	$2.75
#60744	#1	3/8"	.073"	$2.75
#60745	#1	1/2"	.073"	$2.75
#60746	#2	1/4"	.086"	$2.75
#60747	#2	3/8"	.086"	$2.75
#60748	#2	1/2"	.086"	$2.75

Miniature Brass Machine Screws, Nuts & Washers

10 PCS./PKG. $2.75/PKG.

Round Flat Hex

Item#	Item#	Item#	Size	Long
70153	70169	70185	00-90	1/8"
70154	70170	70186	00-90	1/4"
70155	70171	70187	00-90	3/8"
70156	70172	70188	00-90	1/2"
70157	70173	70189	0-80	1/8"
70158	70174	70190	0-80	1/4"
70159	70175	70191	0-80	3/8"
70160	70176	70192	0-80	1/2"
70161	70177	70193	1-72	1/8"
70162	70178	70194	1-72	1/4"
70163	70179	70195	1-72	3/8"
70164	70180	70196	1-72	1/2"
70165	70181	70197	2-56	1/8"
70166	70182	70198	2-56	1/4"
70167	70183	70199	2-56	3/8"
70168	70184	70200	2-56	1/2"

Nuts Washers

Item#	Size	Item#	Size
70201	00-90	70205	00
70202	0-80	70206	0
70203	1-72	70207	1
70204	2-56	70208	2

Reference Chart

Size	Dia.	Clear. Drill	Tap Drill
00-90	.047"	55	61
0-80	.060"	52	55
1-72	.073"	48	53
2-56	.086"	43	50

Special Nut Driver Set for Hex Head Screws and Nuts

#80240
Includes 4 special nut drivers for 00-90, 0-80, 1-72 and 2-56 hex head screws and nuts . . **$14.95**

Hardware Organizer

18 Compartments.
Over all size 3-3/4" x 7-5/8" x 13/16".

#81498 (Set of 2) **$7.95**

The Mercedes Benz of Precision Screwdrivers from WIHA™ of Germany

These professional quality screwdrivers are the last ones you'll ever have to buy! Tool blades are made of high alloy chrome-vanadium-molybdenum steel with precise tolerance black oxide tips. Comfortable, tapered handles are molded to blades so they'll never come loose the way cheaper, glued on copies can. You'll also get added control with the finger tip rotation cup at the back end. All Wiha tools are guaranteed for life.

Screwdriver set includes:
Slotted 1/16", 5/64", 3/32", 1/8"
Phillips #00, 0, 1

#80775 BEST BUY! A complete set of 7 screwdrivers with a FREE weighted stand for easy access to 6 of your most-used screwdrivers. Overall length: 4-3/4" to 6-3/4".
List Price $32.95 . . . . . Our Price **$27.95**

#80776 Magnetizer/Demagnetizer. Just slip your screwdriver blade (or any steel item) through the opening to magnetize or demagnetize. A great way to hold those hard-to-start mini screws. **$8.95**

Wiha Precision Nutdriver Sets, Torx Drivers, Ballpoint Hex Drivers and Miniature Pry Bar feature the same high-quality construction as the screwdrivers.

#81546 8-piece Nutdriver Inch Set
Includes sizes 3/32, 7/64, 1/8, 9/64, 5/32, 3/16, 7/32, and 1/4 inch; all with 2-3/8" long blades.
List $46.90 . . . . . Our Price **$39.95**

#81547 8-piece Nutdriver Metric Set
Includes sizes 2.5, 3.0, 3.5, 4.0, 4.5, 5.0, 5.5, 6.0 mm; all with 2-3/8" long blades.
List $47.30 . . . . . Our Price **$39.95**

#81707 7-piece Torx Driver Set
Includes sizes T-5, T-6, T-7, T-8, T-9, T-10 and T-15 with 1-9/16" to 2-3/8" long blades. List $42.10 . . . Our Price **$35.95**

Ballpoint Hex Drivers let you drive hex head cap screws, button head screws and set screws at an angle up to 25° off-center (see illustration).

#81708 8-piece Inch Set
Includes sizes .050, 1/16, 5/64, 3/32, 7/64, 1/8, 9/64, and 5/32 inch; with 1-9/16" to 2-3/8" long blades. List $39.00 . . . Our Price **$32.95**

#81709 5-piece Metric Set
Includes sizes 1.3, 1.5, 2.0, 2.5, and 3.0mm; with 1-9/16" to 2-3/8" long blades. . . . . List $24.00 . . . Our Price **$20.45**

#81576 Miniature Pry Bar
Great for pulling miniature pins and nails, railroad spikes, staples, etc. Has .040" wide x .137" long slot in a chamfered tip; 2" long blade. . . . . List $7.30 . . . Our Price **$6.25**

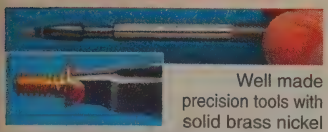
WIHA System 4

Micro Driver Sets with a full range of bits for precision repair and assembly work. All bits have slim 5/32" hex shanks. Packed in a handy plastic storage box.

#81753 Technicians 27-piece Micro Bit Inch Set
Includes 4-1/4" handle; 4-1/2" extension; 1/16, 3/32,1/8, 5/32 slotted; #000, 00, 0, 1 Phillips; .050, 1/16, 5/64, 3/32, 7/64, 1/8, 9/64, 5/32 hex; and T3, T4, T5, T6, T7, T8, T9, T10, T15 Torx bits. . . . . List $49.98 . . . Our Price **$42.45**

#81769 Technicians 27-piece Micro Bit Metric Set
Includes 4-1/4" handle; 4-1/2" extension; 1.5, 2.0, 3.0, 4.0mm slotted; #000, 00, 0, 1 Phillips; .7, .9, 1.3, 1.5, 2.0, 2.5, 3.0, 4.0mm hex; and T3, T4, T5, T6, T7, T8, T9, T10, T15 Torx bits. . . . . List $49.98 . . . Our Price **$42.45**

Screw Starters for Micro Size Screws

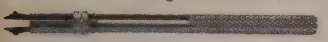


Well made precision tools with solid brass nickel plated handles and steel jaws. Holds or releases slotted screws with the push of a button.

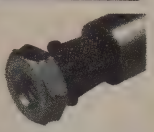
#15157 Holds #0, 1 & 2. 3" long **$7.95**
#15158 Holds #0, 1 & 2. 6" long **$9.95**
#15159 Holds #3, 4 & 5. 3" long **$7.95**
#15160 Holds #3, 4 & 5. 6" long **$9.95**

NEW! Yes...We Have Nut Starters, Too!

#21116A The Gripster type has micro spring fingers that grab the outside of the nut. Works on miniature sizes #00 through #10. Releases by pressing trigger on back end. 4-1/2" long **$4.95**



#82529 The General type has a spring steel chuck that grabs the inside of the hole. Works on sizes from #3 through 5/16". Releases by sliding collar on chuck. 5" long. **$8.95**



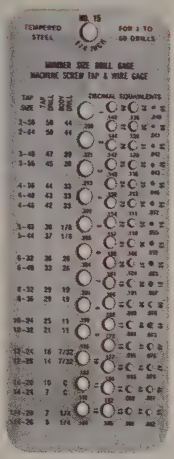
Get Organized with Living-Hinge Mini Containers

These little containers are great for storing miniature hardware, small parts, taps and dies, rotary tool and lathe accessories, ship model fittings, drill bits, knife blades, cutters and anything else you need to keep organized, handy and protected. Made of tough polypropylene with a snap lock top and a living hinge that never wears out. Smooth, straight sides let you stack containers like building blocks to conserve space. Includes three sizes: 1-1/8" x 11/16" x 1-9/16" tall, 1-9/16" x 11/16" x 2-1/2" tall and 1-9/16" x 1-3/4" x 2-1/2" tall.

#80789 Set of 30 (10 of ea. size) **$14.50**

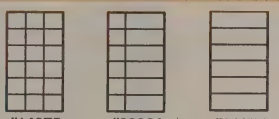
Special Gauge Quickly Identifies Drill Bits, Screws and Wire

A high quality tool that takes the guesswork out of identifying drill bits and wire sizes. Gauge is made of hardened and ground carbon steel with size markings permanently etched and blackened. Measures drill bits and wire from no. 1 through no. 60. Includes decimal equivalents, tap, tap drill and body drill size chart for machine screw sizes from 2-56 through 1/4-28. Overall size 5" x 2".



#10123 . . List $19.95 . . Our Price **$14.95**

Small Price for Small Parts Storage



#14375 **#82261** **#14377**

Get organized with these economical, industrial strength storage boxes. Perfect for storing hardware, model parts, fishing gear, etc. The hard-to-find 18-compartment box keeps everything within easy reach and takes up less space. Molded of indestructible polypropylene with hinge and snap lock latch. Box and hinge are guaranteed to be unbreakable in normal use. These are much better than the common hardware store quality. All boxes are 11" x 6-3/4" x 1-3/4".

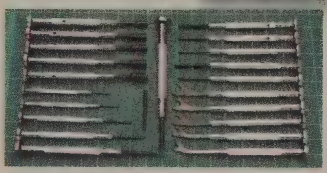
#14375 18 Compartments **$6.95**
#82261 12 Compartments **$6.95**
#14377 6 Compartments **$6.95**
Mix or Match any 3 or more **$5.95 ea.**

Hard-To-Find Miniature Screw and Nut Tools

Just when you need it most, you realize you don't have the right size wrench or screwdriver for that micro size job! And you can't run to the local hardware store. Most just don't stock the sizes offered here. Our sets have been carefully selected to offer you tools for the most common sizes of screws and nuts found in models, watches, instruments, calculators, business machines, cameras, etc. All sets include hardened steel blades with nickel plated swivel head handles and convenient plastic box.

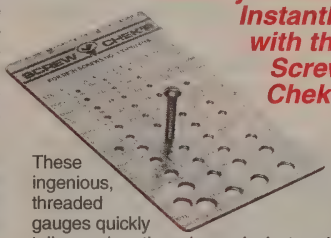
#14155 Four Piece Phillips Head Screwdriver Set Includes #0, 1, 2 and the almost impossible to find #00. . **$4.95**

#28106 Six Piece Jeweler's Screwdriver Set. Includes 3/64", 5/64", 3/32" and 1/8" wide flat blades and #0 and #1 Phillips. . . **$5.95**



#14158 21 Piece "Everything" Set. Includes 1/8", 5/32", 3/16", 7/32" and 1/4" open end wrenches; 1/8", 9/64", 5/32", 11/64" and 3/16" nut drivers; 1/16", 5/64", and 3/32" hex key wrenches; 1/32", 3/64", 5/64", 3/32", 1/8" and 9/64" flat blade screwdrivers; #0 and #1 Phillips head screwdrivers. **$19.95**

Identify Screws Instantly with the Screw Chek'r



These ingenious, threaded gauges quickly tell you size, threads per inch, tap drill size, clearance drill size, length and basic diameter. Even straightens bent screws and cleans up rusty or battered threads. Made of heavy gauge, satin chrome plated steel. Instructions included.

#60361 Inch Screw Chek'r for American and Unified screws from no. 1 thru 5/16". Also identifies wood screws, sheet metal screws, rivets, cotter pins. **$19.95**

#60345 Metric Screw Chek'r for metric screws from 2mm thru 7mm (not shown). **$19.95**

BEST BUY! SAVE 10%
#80322 Set of both Screw Chek'rs **$35.95**

Glass Top Aluminum Containers Keep the Smallest Parts Organized

A unique idea in small parts storage. Great for mini screws, model parts, ship fittings, etc. Aluminum case with hinged lid holds glass top containers neatly in place.

#14245 Case is 6-3/8" x 4-3/8" x 3/4" deep; with 24 containers, 1" dia. x 1/2" deep. **$12.95**
2 or more **$10.95 ea.**

#81366 Case is 6-1/2" x 5-1/4" x 3/4" deep; with 20 containers, 1-1/4" diameter x 7/16" deep. **$12.95**
2 or more **$10.95 ea.**

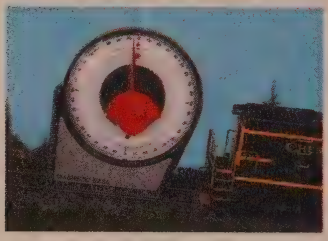
Cleaning Baskets Keep Small Parts from Getting Lost or Damaged

Don't dredge through the sludge at the bottom of your cleaning tank looking for lost parts. Use these spring-loaded "clamshell" baskets that safely hold even the smallest parts while you rinse them in solvents. Your hands will be protected from harmful chemicals and the cleaned parts will drain easily. Made of stainless steel with plastic handles.

#81755-S Small Cleaning Basket 1-7/16" dia. clamshell, 6" long . . **$4.95**

#81755-L Large Cleaning Basket 2-1/4" dia. clamshell, 6-3/4" long . **$5.95**

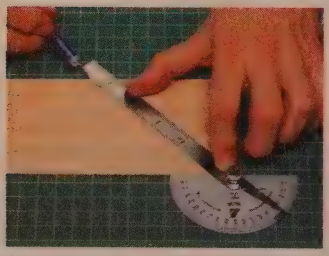
Precision Angle Gauge Measures in 1° Increments



A hard-to-find, patented tool for measuring grades and keeping them consistent on model railroad layouts. Also used for construction projects that must be precisely level. The damped pendulum and easy reading dial with hairline markings make this tool much more accurate than bubble type levels. Well made of tough, high impact plastic. 4-1/8" diameter with magnetic base.

#82280 Precision Angle Gauge . . **$12.95**

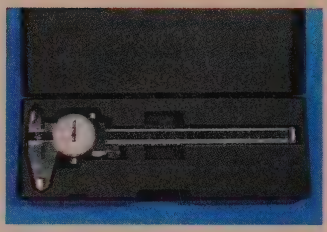
Multi-Purpose Stainless Steel Protractor



A beautifully made tool for setting or checking angles. Use for marking wood, scribing metal, checking chisel and drill bit angles, machine set up, etc. Stainless steel with engraved and blackened calibrations. 3-3/8" x 2" plate, 8" blade.

#50278 S.S. Protractor **$11.95**

Easy-To-Read Stainless Steel Dial Caliper



This is a precision, industrial quality tool made of the finest satin-finish stainless steel. The finger-tip drive roller and zero-backlash gearing rotate the pointer in smooth, precise movements. The large, easy-to-read dial is zero adjustable and clearly graduated in thousandths of an inch. Measures inside, outside, depth and step up to 6". Includes foam lined hard-shell case for protected storage.

#80973 S.S. Dial Caliper . . List $44.95
Our Price **$32.95**

Proportional Divider Scales Drawings Up or Down in Seconds

No need to measure, calculate and remeasure when working from scale drawings. Our proportional divider does it for you. An all-metal precision instrument. Includes vinyl wallet and instructions.

#14129 Proportional Divider.
List $69.95 . . . . . Our Price **$59.95**

Center Finder Rule Replaces Complex Calculations

This 12" stainless steel center finding rule quickly and accurately finds the exact center of circles, squares and rectangles without tedious mathematical calculations. A valuable tool for woodworking, graphic arts and model making. Easy to use...simply equalize the readings on each side of zero and mark the center at zero. Reverse side has conventional scale graduated in 64ths and 32nds. 1" wide x 12" long.

#14421 Center Finder Rule **$8.50**

Digital Caliper – The Ultimate in Measuring Simplicity

Unlike Vernier and other calipers that can be difficult to read, our Digital Caliper gives you accurate readouts directly on the large LCD in thousandths of an inch or in tenths of a millimeter. Rezero button lets you take "2-step" measurements without calculations. Made in Switzerland of high performance polymer. Measures insides, outsides, depths and steps up to 6". Includes battery and instructions.

#81339 Digital Caliper . . . List $86.75
Our Price **$79.95**

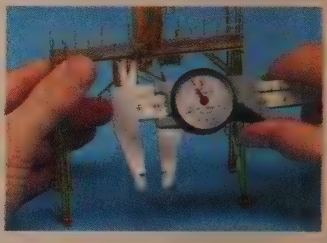
#82566 Left-Hand Version . . List $91.95
Our Price **$84.75**

Stainless Steel Machinist's Rules for Accuracy and Long Life

These stainless steel rules will give you the kind of accuracy and readability you won't get with plastic or wooden rulers...and they'll last a lifetime. Both rules have engraved and blackened markings calibrated in both inch and metric graduations.

#10114 6" Rule **$2.50**
#10115 12" Rule **$8.50**

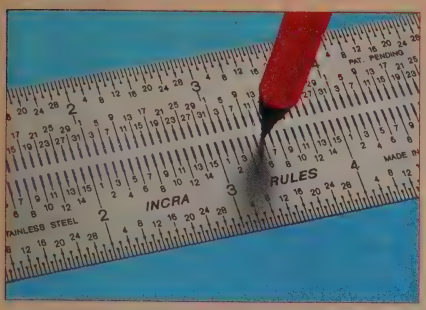
Dial Caliper Measures in HO Scale



Improve accuracy, save time and take measurements directly in HO scale with just a glance. One turn around the dial measures 3 scale feet in precise 1/2" increments. Features pre-set markings for coupler height and track width. Takes accurate inside, outside and depth measurements. A quality, easy-to-read instrument molded in fiberglass reinforced plastic. Capacity: 5-3/4" (42 scale feet). Can also be used for O scale. Made in Switzerland.

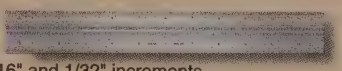
#81066 HO Scale Dial Caliper . . **$37.95**

Special Rulers Eliminate Marking Errors



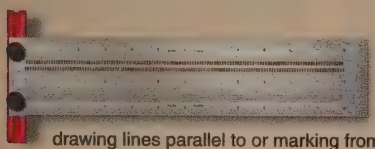
Now you can avoid errors when laying out parts with pencil and ruler. These precision stainless steel rulers feature micro-fine guide holes and slots which effortlessly place your pencil point or scriber exactly on target. They also have easy-to-read, matte finish engraved lines and characters that eliminate eye strain and squinting. Choose from 5 styles shown:

MARKING RULE



For general layout work. 1-5/8" wide. Has 4 scales with holes and slots in 1/16" and 1/32" increments.

#81565 6" long . . . . . **$12.95** **#81569** 12" long **$19.95**

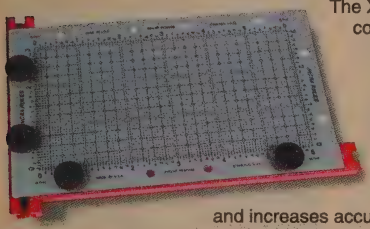


T-RULE

3" wide ruler with 6 scales and 5" long T-Bar. Features 1/64" hole spacing for extreme marking accuracy. Great for drawing lines parallel to or marking from the edge of your workpiece. Also acts as a T-square for drawing perpendicular lines. Includes an edge scale for vertical measuring.

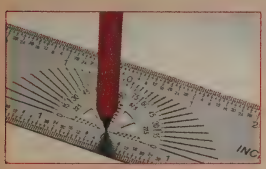
#81566 6" long . . . . . **$23.95** **#81570** 12" long **$34.95**

X-Y MARKER



The X-Y Marker performs one of the most common layout and measurement jobs in every model builder's shop. It marks both the X and Y position on your workpiece in a single operation. Instead of drawing two perpendicular lines, then finding and marking the intersection, the X-Y Marker does it for you, instantly and perfectly. Saves time and increases accuracy! 3" x 6" with 1/16" hole spacing.

#81874 X-Y Marker **$29.95**

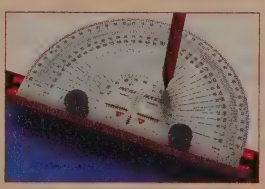


CENTERING RULE

12" long x 1-5/8" wide ruler locates the exact center of your workpiece. Also works great for laying out a series of measurements on both sides of a starting point. Has 1/32" hole spacing plus protractor marked in 5° increments.

#81668 Centering Rule **$22.95**

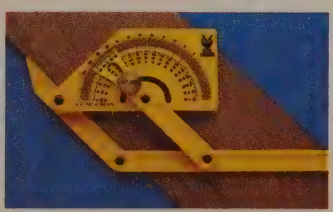
6" PROTRACTOR



Features the same marking abilities as the straight rulers. Includes holes on 1/2° increments, a T-Bar for edge positioning, special viewing windows for aligning your center point, a center-finding straight edge with holes on 1/32" increments and a mechanical pencil.

#81643 6" Protractor **$34.95**

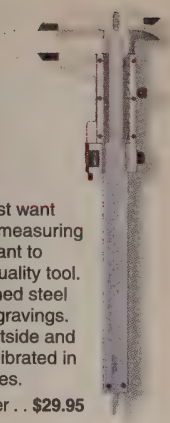
Patented Angle Setter / Protractor



This new style protractor can measure, mark and transfer any angle...inside, outside, barred angle and slope angle... under 90° or over 90°. It's ideal for fitting dollhouse siding to roof angles, setting table saw and disc sander angles, gauging model railroad slopes, measuring ship model mast rake angles, model airplane dihedral and hundreds of other uses. Made of high impact plastic with knurled brass locking nut. Longest blade is 6" long. Winner of Switzerland's gold award for new inventions. Instructions included.

#60646 Patented Angle Setter/Protractor **$7.95**

Industrial Quality Vernier Caliper for Precise Measuring



If you're doing close tolerance work or just want the best for all your measuring needs, then you'll want to own this industrial quality tool. Made of fully hardened steel with clear, sharp engravings. Measures inside, outside and depth up to 5.5". Calibrated in millimeters and inches.

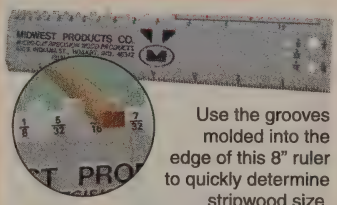
#10112 Vernier Caliper . . **$29.95**

Solid Brass Caliper

A nicely made and attractive tool for taking quick measurements of wood sheet thickness and strip sizes, screw dimensions, and hundreds of other uses. Sliding dovetail construction. 4" long. Measures in inches and millimeters.

#80821 Brass Caliper . . **$6.95**

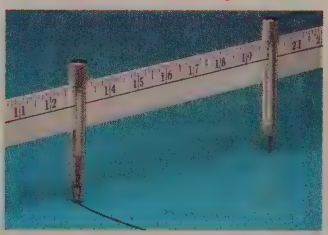
Stripwood Gauge is Fast and Accurate



Use the grooves molded into the edge of this 8" ruler to quickly determine stripwood size. Measures 15 rectangular sections from 1/64" to 1-1/2" and 5 dowels from 1/16" to 1/4" diameter.

#81854 Stripwood Gauge **$3.95**

Draw Any Size Circle with Our Yardstick Compass



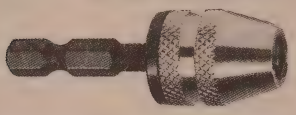
Slip these trammel points on any standard size yardstick and draw arcs and circles up to 72" dia. Use a longer stick the same width and thickness as a yardstick and draw circles as large as you like. All aluminum except steel point. 3-1/2" long. Great for laying out model railroad curves.

#14302 Yardstick Compass **$7.95**

Special Chucks Fit Cordless Screwdrivers for Slow Speed Drilling

Most drills and rotary tools spin too fast for working in plastic and for tiny detail work. These special chucks have 1/4" hex shanks that fit your slow turning Black and Decker®, Craftsman, or other cordless screwdriver to solve this problem. Take advantage of the quick-change feature of the 1/4" shank...buy several chucks and keep your most-used drill bits ready to go. Drill bit not included.

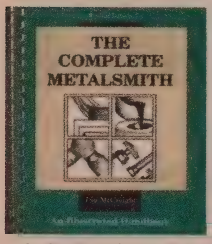
#82541 Precision Micro Chuck for Cordless Screwdriver. Holds drill bits from #60 to #80 . . . . . **$9.95**
3 or more **$7.95 ea.**



#81852 Mini Chuck for Cordless Screwdriver. Holds drill bits from #59 to 1/8". **$9.95**
3 or more **$7.95 ea.**

The Complete Metalsmith

by Tim McCreight



This is the only book you will ever need on metal working. Its concise format covers materials, chemical coloring, surfaces, shaping, joining, casting, cutting, heat treating and tools, with hundreds of illustrations. The spiral binding allows the book to lay flat and occupy less space on your workbench.

#81286 200 pages **$16.95**

Miniature Clamps

Hardware store size C clamps are just too big for building models, miniatures and other small projects. When you're working small, these are the hard-to-find sizes you need.

#21112 Steel with black enamel finish. Plated screws with slotted-for screwdriver ends. Set of three. Maximum openings: 1/2", 7/8" and 1-7/8". . . **$7.95**

Flex-Pads Sand Complex Curves and Narrow Slots

These softly padded, double sided flexible files let you sand convex or concave curves, small slots and other hard-to-sand shapes without gouging or scratching. For use on wood, metal, plastic, fiberglass and most other materials. Can be cleaned with soap and water for extended life. 1/8" thick x 1/2" wide x 6" long. Use dry or wet for ultra-smooth finishes.

#70214 Flex-Pad, 150 grit (2). . . **$4.50**
#70213 Flex-Pad, 280 grit (2) . . **$4.50**
#70212 Flex-Pad, 320 grit (2) . . **$4.50**
#70211 Flex-Pad, 600 grit (2) . . **$4.50**

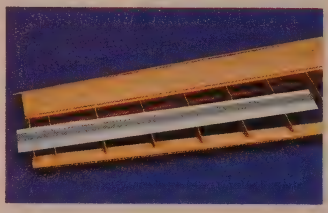
TRIPLE GRIT FLEX-PAD RESTORES CLEAR PLASTICS

This Flex Pad has three different color-coded ultrafine grits on one pad. This unique innovation has been designed for removing imperfections and for restoring canopies, windshields, headlights and other clear plastic items. Works equally well on other plastic, metal and painted surfaces. Instructions included.

#70215 Triple grit Flex-Pad (2) . . **$6.50**

#70239 Assortment of 5 Flex-Pads, one of each above . . . **$11.95**

T-Bars Sand Long Edges and Multiple Joints Evenly



These are the best tools for giving model airplane wings a smooth and even final finish before covering with heat applied film. They remove those small bumps and imperfections that don't show up until after the wing is covered. They're also great for smoothing long edges and surfaces. Bars are 2" wide, super flat, super smooth extruded aluminum. Both sizes use our special 2" wide x 10 yard peel-and-stick stearate sandpaper rolls sold below.

#80491 11" T Bar Sander **$3.95**
#80492 22" T Bar Sander **$5.50**
#80772 Set of Both T Bar Sanders
Save 10% **$8.50**

ALUMINUM OXIDE PEEL-AND-STICK STEARATE ROLLS

Longer lasting stearate sandpaper has a special coating that helps prevent load-up, especially on soft materials. 2" wide x 10 yard peel-and-stick rolls.

#80494 120 grit **$9.95**
#80495 220 grit **$9.95**

Incredible Sanding Tools Last Almost Forever

These Perma-Grit tools are made of tungsten carbide permanently brazed to steel. In normal use, they'll last a lifetime and they won't load up like sandpaper. Sand anything...plywood, fiberglass, epoxy, styrofoam, hardwood, softwood, plastic. 7-1/2" to 9" long.

A. #14524 1/4" diameter. **$5.95**
B. #14525 1/2" diameter. **$5.95**
C. #14526 3/4" diameter. **$6.95**
D. #14527 60° V-shaped with a 1/8" radius. **$6.95**
E. #14528 3/4" radius **$6.95**
F. #14529 1-1/2" flat. **$6.95**
#15295 Six piece set includes one each of items A thru F **$34.95**

G. #82092 1/8" diameter with wood handle. Fine grit all around. . . . **$7.45**
H. #82093 1/8" diameter with wood handle. Coarse grit all around. . . **$7.45**
J. #82094 3/4" radius with fine grit on concave surface. **$6.95**
K. #82095 3/4" radius with coarse grit on concave surface. **$6.95**
L. #82096 3/4" square with wood handle. Fine grit on two sides; coarse grit on the other two sides. **$7.45**
#82114 Five piece set includes one each of G thru L **$31.95**

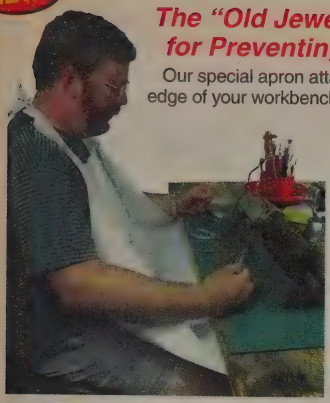
Miniature Brass Eye Pins

Use for hanging mini items in the dollhouse, railing stanchions for railroad models, tying off lines on ship models, etc. .033" diameter brass, 1/2" long, 3/64" inside eye diameter.

#60405 Eye Pins (Approx. 144 pcs/pkg.) **$3.95/pkg.**

NEW!

The "Old Jeweler's Trick" for Preventing Part Loss



Our special apron attaches to the bottom edge of your workbench to catch parts that fall during project construction. Two rows of Velcro® fasteners let you reposition apron for use while standing or sitting. Made of durable 7 mil vinyl. Overall size: 35" wide x 43" long. Can easily be trimmed to smaller size if desired.

#82580 Parts Catching Apron **$7.95**

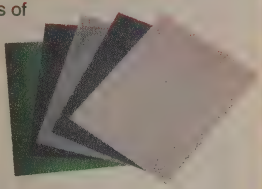
High Precision Digital Scale at an Incredibly Low Price!

High precision 4 pound capacity weight scale with digital readout in 0.1 ounce increments. Includes tare feature for weighing items in containers, lithium battery, and auto shut-off to conserve power. 5-1/2" wide platen.

#82331 Digital Scale. . . . . ~~$46.95~~

CLOSEOUT! ONLY $35.20

Flexible Film Sandpaper Lasts Longer and Gives You an Ultrafine Finish

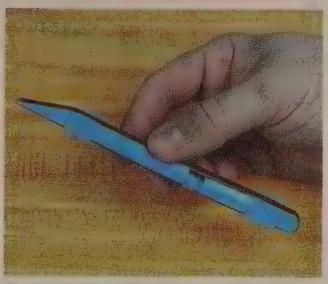


Fine grains of abrasive are bonded to a tough, tear resistant polyester with a flexible adhesive. Unlike thicker paper-backed sandpaper made with stiff adhesives, it won't crack, peel or tear, even when wet. A favorite with plastic modelers, it is also ideal for fine finishing of wooden miniature furniture and ship models. 4" x 5" sheets. Sold in ten-packs only.

#60467 150 Grit **$3.25/pk**
#60469 320 Grit **$3.25/pk**
#60471 600 Grit **$3.25/pk**

#60472 10-pc. Micro-fine assortment. 4" x 5" sheets of the world's finest and most exotic abrasives. 2 sheets each of grits from 23 micron down to .5 micron (equivalent to 10,000 grit!). Includes silicon carbide, aluminum oxide, cerium oxide and chromium oxide. **$3.25**

Micro Sanding Wands for Delicate Control



These Micro sanding wands use 1/4" wide, abrasive belts that can be used wet or dry and work well on almost any material. Made of tough, impact resistant polypropylene with a spring loaded tensioning device that allows a quick belt change. Color coded so you can identify different grits instantly.

#81471 Set of four includes one each; Yellow, 400 Grit; Green, 320 Grit; Blue, 240 Grit; Red, 120 Grit. . . **$10.95**

Micro Sanding Wand Belts, set of 5.

#60388 400 Grit **$4.50**
#60389 320 Grit **$4.50**
#60390 240 Grit **$4.50**
#60391 120 Grit **$4.50**

Micro-Mesh Restores Gloss to Damaged Finishes

Micro-Mesh's micro grains of abrasive are bonded to a soft cloth backing with a resilient adhesive. This construction cushions the abrasive, creating a smooth shaving action rather than gouging and abrading the surface. Micro-Mesh lasts far longer since its construction prevents the abrasive crystals from fracturing and overheating. Kit includes everything you need to restore a professional finish on plastic models: six 3" x 4" sheets of Micro-Mesh: one each of 2400, 3200, 4000, 6000, 8000 and 12000 grit; foam sanding block; micro-gloss polishing cream; 13" x 17" non-woven polishing cloth and instructions. Can also be used for creating crystal clear finishes on canopies and windshields, polishing metals, and producing glass-smooth finishes on wood.

#80939 Micro-Mesh Kit **$17.95**

4" x 6" Micro-Mesh Sheets Only $2.95 per sheet

#80940 2,400 grit **#80943** 6,000 grit
#80941 3,200 grit **#80944** 8,000 grit
#80942 4,000 grit **#80945** 12,000 grit

Good Quality Sanding Blocks that are Easy to Use

Our sanding blocks are a lot better than the ones you've seen in hobby shops (the ones with the little wood wedges that are supposed to hold the sand paper in place but keep falling out!). These are easy and comfortable to use...with a milled no-slip finger groove in the sides and a sure lock clamp that keeps sandpaper taut and securely in place. And because the clamp is in the back, you can use both sides before changing sandpaper. They also have a thin rubber pad glued to the working surface to prevent gouging. Well made in the USA of sanded hardwood.

#60382 1" w x 8" l x 1-3/4" thick . . **$12.95**
#60383 2" w x 8" l x 1-3/4" thick . . **$15.95**
#60442 Set of both blocks **$26.95**

REPLACEMENT SANDPAPER IN 10 FT. ROLLS

1 inch wide			2 inch wide		
#60443	80 grit	$2.95	#60449	80 grit	$4.95
#60444	120 grit	$2.95	#60450	120 grit	$4.95
#82405	240 grit	$2.95	#82406	240 grit	$4.95
#60446	320 grit	$2.95	#60452	320 grit	$4.95
#60447	400 grit	$2.95	#60453	400 grit	$4.95

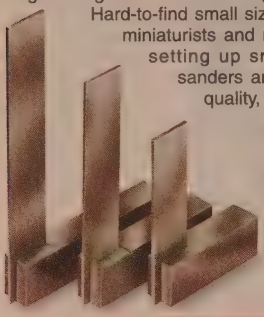
2" x 2" Soft Touch Pads

Micro-Mesh abrasive laminated to both sides of a 1/8" soft foam pad with rounded corners. Set of 6 pads with the same grit both sides: 2400 grit, 3200 grit, 4000 grit, 6000 grit, 8000 grit and 12000 grit.

#81601 Set of 6 Soft Touch Pads . . **$7.50**

Steel Machinist's Squares... the Ultimate in Accuracy

You've never seen anything better for marking a perfect 90 degree angle. Use for marking metal, wood, plastic, etc. Hard-to-find small sizes are a must for dollhouse miniaturists and modelers. Also excellent for setting up small table saws, disk/belt sanders and other tools. Made of fine quality, fully ground carbon steel.



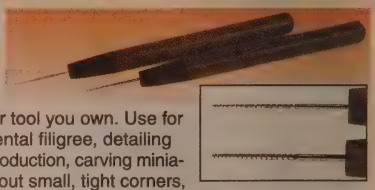
#10117 3" Blade, 1-7/8" Beam **$9.95**

#10118 4" Blade, 2-1/2" Beam **$11.95**

#10119 5" Blade, 3" Beam **$12.95**

#15216 Set of 3
SAVE $4.90 . . . . . **$29.95**

Micro Broaches...Great New Tools for Filing and Shaping Wood, Resin and Plastic



These micro-miniature broaches create ultra fine details unlike any other tool you own. Use for making ornamental filigree, detailing patterns for reproduction, carving miniatures, cleaning out small, tight corners, cutting narrow slots and enlarging small holes. The stainless steel spiral teeth never rust or clog and are contoured to remove material on the pull stroke. Set includes two broaches: one tapered to .020" dia.; the other to .033"dia. Wood handles are 3/8" diameter x 4" long. Total length 5".

#81847 Micro Broach Set **$12.50**

Needle Rasps are Extra Coarse for Quick Stock Removal

Use these rasps for quick stock removal in wood, plaster, stone, plastic, fiber and wax. 6-piece set, 5-1/2" long overall.

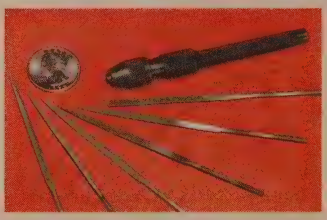
#33110 Needle Rasp Set **$13.95**

Extra Coarse Mini Size Riffler Files for Fast Stock Removal

These wood rasps with riffler file shapes cut through both hard and soft wood, quickly and easily. And because they're extra coarse, they won't load up as quickly as the finer cut rifflers we sell. Their unique design lets you do intricate work that ordinary straight rasps can't. 12-piece double ended set includes half-round, triangle, flat, square, round and wedge shapes. Made of alloy steel. Approx. 5-1/2" long overall.

#82262 Riffler Rasp Set
List $24.95 . . . . . Our Price **$19.95**

Micro Size File Set with Free Handle



Our hard-to-find micro size needle files are 30% smaller than other files on the market, making them ideal for all types of intricate filing jobs. Used extensively by jewelers and instrument makers. Fine cut for use on wood, metal and plastic. 4" long with 1/16" dia. shanks. Includes FREE collet type handle for delicate control. Includes 6 different shapes.

#50323 Micro-Size File Set with Handle.
Value $15.90 . . . . . Our Price **$11.95**

Jeweler's Non-Mar Hand Vise

Use this unique tool to hold miniature items while filing, polishing, grinding, drilling, etc. As wedge is pushed in opposite end, leather-lined jaws tighten to grip the workpiece without marring it. Body and wedge are made of tough high-impact plastic. 6-1/2" long. Jaws open to 1/2".

#81011 Jeweler's Hand Vise . . . **$7.95**

Probe Set for Micro-Miniature Manipulation

These surgical quality probes have hundreds of uses for model makers, miniaturists, electronic hobbyists, jewelers, etc. Use them for positioning, soldering, gluing, adjusting... any type of mini-manipulation. Excellent for hooking or unhooking tiny springs and ceramic detail work. Polished and hardened stainless steel with needle-sharp points. 6" long overall.

#20124 5 Piece Probe Set
List $15.95 . . . . . Our Price **$11.50**

Micro-Size Precision Reamers Remove Burrs, Enlarge Holes

These handy reamers finish the job when drills can't deliver an exact size hole. Use them for enlarging, shaping, cleaning and cutting holes in metal, plastic or fiber. Hardened steel with easy grip knurled handles. Hole size .093" (#42) to .024" (#73). 2-3/4" to 4" long. 6-piece set. Plastic storage wallet included.

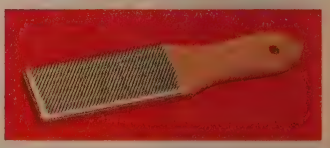
#26108 Reamer Set **$15.95**

Tungsten Carbide Needle Files

These fantastic Tungsten Carbide needle files last far longer than ordinary needle files and won't load up nearly as fast. All files are approx. 7" long with 3/16" dia. handles. 5 piece set includes round, square, triangle, flat and half round shapes. Order a set today for your next project. You may never use ordinary steel needle files again!

#80741 Coarse, 80 grit . . . . . List $39.95 . . . . . Our Price **$32.95**
#80742 Fine, 120 grit . . . . . List $39.95 . . . . . Our Price **$32.95**

Cleaner for Needle and Riffler Files



Sharp steel bristles mounted in a hard-wood block quickly remove filings from grooves of files to restore their cutting ability. 8-1/4" long x 1-1/2" wide.

#70216 File Cleaner **$5.50**

Flex-I-File...A Unique Finishing Tool for the Finest Professional Results

This tool works where no other tool can. It smooths the edges of fine slots, follows compound curves and contours and works into corners of tight interior angles. Ideal for removing flash or glue seams from plastic and metal castings and for smoothing turnings while still in the lathe. Tough, Mylar backed abrasive ribbon with end loops slips easily and quickly over the anodized aluminum frame. The spring action of the frame maintains a constant working tension for delicate control with hairline accuracy. For fine finishing of models, dollhouse miniatures and other small-scale projects, this unique tool can't be beat. Frames are 4" x 4-1/4". Abrasive ribbons are 1/4" wide x 4-1/4" long. Set includes 3 frames and 21 color coded ribbons (7 each 150, 280 and 320 grit).

#60619 Flex-I-File Set **$23.95**

Replacement Ribbons, Package of 12

#60620 150 grit **$5.25**
#60621 280 grit **$5.25**
#60622 320 grit **$5.25**
#60623 600 grit **$5.25**

Riffler Files Do Work Impossible with Regular Files

Riffler files have been used by tool and die makers for years. They're now available to hobbyists in fine cut for detail work in wood, plaster, plastic and metal. Made of alloy steel. Each riffler is double ended for twice the life. Approximately 6" long.

#33111A Ten Piece Riffler Set . . **$19.95**

Swiss Pattern Needle Files

Needle files are a must-have tool for all modeling projects. Use for removing, smoothing and shaping steel, brass, aluminum, cast metal, plastic and wood. Can also be used for shaping small turnings while still in the lathe. All files are approximately 5-1/2" long with 1/8" dia. handles. Sold in sets of twelve in a vinyl storage wallet. Medium cut.

#33108 Needle File Set . . List $19.95
Our Price **$12.95**

Handles Make Files Safer, Easier and More Comfortable to Use

Riffler and needle files are easier to grip when held in a handle...and the handles keep your palms from being stabbed by the back end of the file. Made in Germany of high impact plastic. 3" long.

#81740 Riffler File Handles fit our 5-1/2" to 6" long Riffler Files and Rasps. Set of 5 . . . . . **$10.45**

#81220 Needle File Handles fit all round handle, 5-1/2" to 6" long needle files and rasps. Set of 3 . . . . . **$10.45**

Coarse Needle Files for Working in Wood

This set is about 30% larger and coarser than most other needle-files, making them ideal for use on balsa, basswood and other soft materials. And, since the grooves are farther apart, they won't become clogged as fast on harder woods, brass and aluminum. Set includes 10 different shapes: round, triangle, square, flat, oval, 1/2 round, equalling, knife, barrette and warding. Files are 7" long with a 3-1/2" cut portion and 3/16" dia. handles.

#60526 Needle File Set **$14.95**

Hard-to-Find Taps and Dies in Micro Miniature Sizes

NOW AVAILABLE IN METRIC!

Die Taps

Use these machine screw taps and dies for models, clocks, instruments, watches and business machines. Both taps (for putting threads in a hole made with tap drill) and dies (for putting threads on a rod) are tungsten steel. (**Note:** Metric taps and dies are high speed steel). Dies are 13/16" outside diameter and are adjustable for thread fit allowance.

INDIVIDUAL TAPS AND DIES

Add T for Taps, D for Dies, TD for Tap Drill and CD for Clearance Drill after item#.
Tap and Clearance drills are $1.95 each.

	Size	Die	Tap	TD	CD
#14144	00-90	$17.95	$4.95	#61	#55
#14145	0-80NF	11.50	4.95	#55	#52
#14146	1-72NF	9.95	4.95	#53	#48
#14147	2-56NC	9.95	4.95	#50	#43
#14148	3-48NC	9.95	4.95	#47	#39
#14149	4-40NC	9.95	4.95	#43	#33
#14151	6-32NC	9.95	4.95	#36	#28
#14382	8-32NC	9.95	4.95	#29	#19
#82320	M1.6x.35	11.95	9.95	#55	#52
#82321	M2.0x.40	11.95	9.95	#52	#46
#82322	M2.5x.45	11.95	6.95	#46	#37
#82323	M3.0x.50	11.95	5.95	#43	1/8
#82324	M4.0x.70	11.95	4.95	#30	#20

TAP SETS

#20128 Four piece micro size set, 00-90, 0-80, 1-72 and 2-56. . . **$15.95**

#20129 Five piece mini size set, 2-56, 3-48, 4-40, 6-32 and 8-32 . . . . **$19.95**

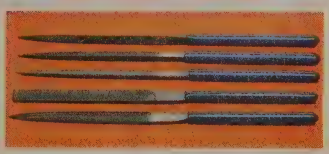
#82327 Five piece metric set, M1.6x.35, M2.0x.40, M2.5x.45, M3.0x.50 and M4.0x.70 . . . . . **$29.95**

TAP AND DIE WRENCHES

A. Tap Wrench (for all taps except 00-90) **#20130** **$4.95**

B. 13/16" Die Stock (handle) **#14152** **$5.95**

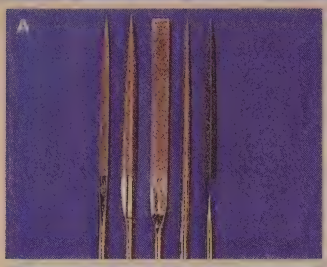
Mid-Size File Set

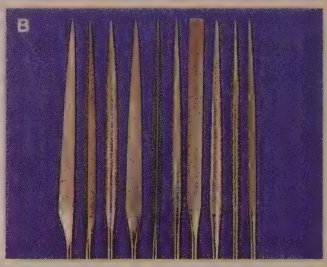


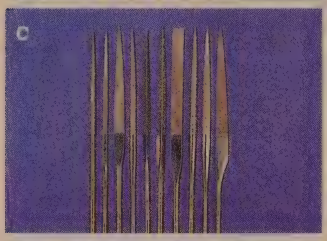
A handy size to have when a needle file is too small and a hardware store size is too big...and the attached handle makes them easy and comfortable to use. (Note – handle style may vary from photo). All files are approximately 7-1/2" long including the handle. Sold as a set of five: 3/8" flat, 1/4" three square (triangle), 3/16" square, 3/8" half round with taper, 3/16" round with taper.

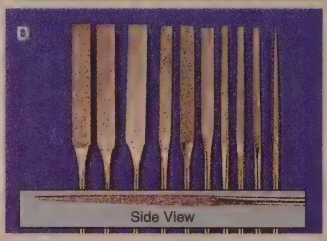
#81063 Mid-Size File Set **$9.95**

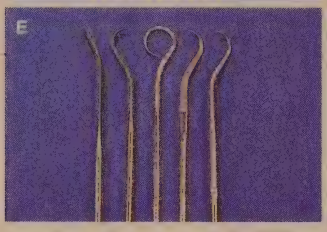
Diamond Coated Files
Smooth and Shape Almost Anything











Diamond-coated files cut faster and leave a smoother finish than ordinary steel files. They'll work on wood, plastic, ceramics, metal, glass and just about anything else. And, because the abrasive is made of genuine industrial diamonds brazed to nickel-plated steel handles, they last far longer than ordinary steel files. All files are diamond-coated on all sides. Shown approx. 40% actual size.

Diamond Needle Files

A. #81119 Needle File Set. 5 assorted shapes 5-1/2" long. 100 grit. **$14.50**

B. #82250 Needle File Set. 10 assorted shapes. 5-3/4" long. 100 grit. . **$18.95**

C. #82248 Mini Needle File Set. 10 assorted shapes. 4" long. 220 grit. . . . **$19.95**

D. #82249 10 piece tapered Needle File Set. Permits easy access to hard-to-reach locations. Includes 3 widths, each in 120, 240 and 320 grits, plus 1 pointed round file in 320 grit. 5" long. **$18.95**

Diamond Riffler Files

E. #81414 Riffler Set. 5 assorted shapes. 5-3/4" long. 220 grit. **$12.95**

F. #82255 Riffler Set. 10 assorted shapes.5-3/4" long. 220 grit. . . . **$19.95**

Open-End Wrenches for Miniature Nuts and Bolts

Hard-to-find miniature wrench set with stamped-steel heads and aluminum handles. Includes inch sizes 3/32, 1/8, 5/32, 3/16, 1/4 and 5/16. Only 4-1/2" long for easy access to small spaces.

#82282 6-piece Miniature Wrench Set
List $16.75 . . . . . Our Price **$12.95**

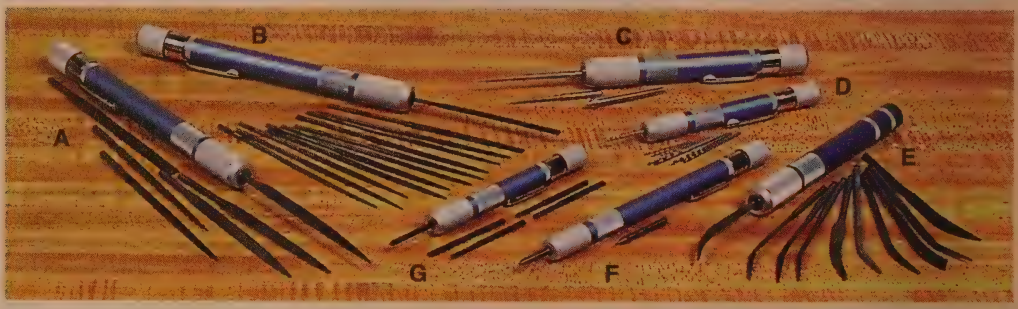
6-Flute Countersinks Make Perfect Recesses for Flat Head Screws

High-speed steel, six-flute design makes smooth 82° countersinks for flush mounting flat head screws in wood, plastic, aluminum, brass and soft steel. 3-piece set includes 3/16", 1/4" and 3/8" diameters with 3/16" and 1/4" shanks.

#82283 3-piece Countersink Set. **$19.95**

Premium Quality Tool Sets Store Bits Right in the Handle

Not cheap imitations!—These jeweler's quality tool sets include beautifully machined aluminum handles with non-slip knurled grips, precision collets and pocket clips. Hollow handles store bits conveniently and safely. Made in USA.



A. #82124 6-piece File Set. Includes 4" long standard needle files in assorted shapes. Handle is 5-3/4" long . . **$14.95**

B. #81845 12-piece Micro File Set. Includes 4" long micro-slim needle files in assorted shapes. Handle is 5-3/4" long. **$16.95**

C. #81650 3-piece Diamond Reamer Set. Enlarges and deburrs tiny holes; cuts in any direction. Includes 3 reamers: 2" long x 1/8" dia. tapering to a point; 1" long x 1/16" dia. tapering to 1/32"; 5/16" long x 3/16" dia. with cone-shaped tip. Handle is 4-1/2" long **$14.95**

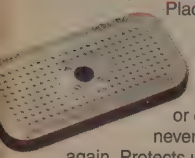
D. #81651 Pin Vise/Drill Bit Set. 0-1/16" collet. Includes 12 high speed steel drill bits in even numbers from #52 thru #74. **$14.95**

E. #82121 10-piece Riffler File Set. Includes 4" rifflers in assorted shapes. Handle is 4-1/2" long. Note: Handle has no storage compartment. **$14.95**

F. #82122 2-piece Scriber Set. Includes hardened scriber tips in micro and miniature sizes. Handle is 5-1/2" long. . . . **$10.95**

G. #82123 5-piece Screwdriver Set. Includes Phillips #000 and #00, flat tips .070", .080" and .097" wide. Handle is 3-3/4" long . . . **$13.95**

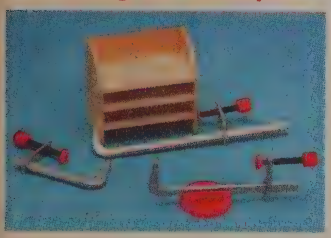
Protect Your Tools! Rust Preventer Drinks Moisture from the Air



Place this convenient tin of silica gel crystals in your tool box, tackle box, gun cabinet or camera case and never worry about rust again. Protects up to 3 cubic feet. Can be reactivated for life (when blue crystals turn pink, put tin in your oven at 300°F for about 3 hrs). Made to government specs. Tin measures 2" x 4" x 1/2".

#14161 Rust Preventer. **$8.50**
2 or more **$7.50 ea.**

Instant Acting Sliding Bar Clamps



These clamps are similar to our miniature C clamps, but have more capacity and adjust to the size of your project instantly. Just slide the moveable jaw against the work and tighten the thumb screw. Plastic swivel jaws hold delicate work tightly without marring. 3 piece set with 2", 3-1/2" and 5" capacity. 1" throat depth on all three. Made of plated steel. Also includes a magnetic base that lets you use any of the three clamps as a third hand.

#60625 Sliding Bar Clamp Set . . **$7.95**
2 or more sets **$6.95 ea.**

Hardwood Chest Keeps Pliers and Other Micro Tools Close at Hand

With our organizer you'll never have to search for the right plier again...and since it holds pliers vertically, you can store seven pliers in the space of two. The open tray and drawer will also hold dozens of other small tools or parts conveniently within reach. Made of sanded and lacquered hardwood with box joint corners and mahogany plywood dividers. Approx. 6" wide x 4" high x 8" deep.

#60284 Hardwood
Plier/Tool Chest. **$26.95**

Stand-Alone Clamps Mount to Your Workbench... Hold Objects Safely, Keep Hands Free

Stand-Alone Clamps snap into bench-mounted bases that prevent tip over and damage to your models during assembly, detailing and finishing. Held upright in either of two positions, Stand-Alone Clamps leave your hands free to complete additional work. Self-locking jaws slide into position and exert as much or as little force as you need. Foam rubber pads protect delicate surfaces. Includes extra pair of jaws so objects can be held from either the inside or outside. Made of plastic, aluminum and rubber. 4" capacity.

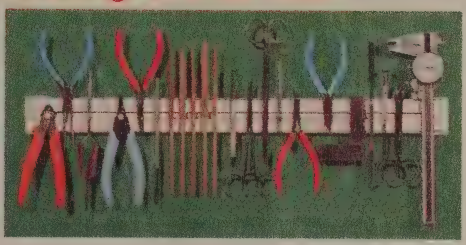
#82443 Stand-Alone Clamps (Pair) . . . . . List $16.95 . . . . . Our Price **$12.95**

Organizer Stores 21 Tools and Saves Valuable Workbench Space

Our 3-level organizer keeps tools within easy reach. Holds pliers, bar clamps, paint brushes, files, X-Acto knives, tweezers and more. Has 21 compartments with 3 different size openings and takes up just 3" x 6" of valuable workbench space.

#60295 Tool Organizer **$14.95**
2 or more **$13.95 ea.**

Magnetic Tool Holder for Up-Front Storage of Small Tools



20" long magnetic tool holder keeps small tools handy, visible and within easy reach. Mounts easily to wall or shelf edge with two wood screws (included). Great for holding kitchen knives as well. Has double row magnets for extra strength.

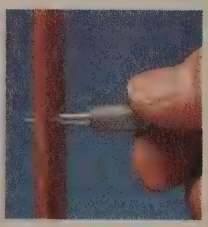
#60458 Magnetic Tool Holder . . . . . **$9.95** . . . . . 2 or more **$8.95 ea.**

Rotary Tray Ends Workbench Clutter

You won't find anything better for storing your most used small tools. The rotary tray holds pliers, knives, tweezers, pencils, needle files, scribers, scissors ...just about anything in less than one square foot of space. Made of high impact plastic with rotating base. 10-1/2" diameter x 7" high. Color may vary.

#82476 Spin-O-Tray **$16.95**

Finger Drills for Delicate, Precision Drilling of Small Holes



These drilling tools are ideal for those times when you need the maximum amount of control for drilling in wood and plastic. And since each drill has its own handle, you won't waste time changing bits the way you have to when using a pin vise. All bits are high speed steel mounted in knurled, no-slip aluminum handles.

#60931 Set of 4, #50 (.0700"), #52 (.0635"), #54 (.0550") and #56 (.0465"). . . . **$7.95**
#60932 Set of 4, #58 (.0420"), #60 (.0400"), #62 (.0380") and #64 (.0360"). . . . **$7.95**
#60933 Set of 4, #66 (.0330"), #68 (.0310"), #70 (.0280") and #72 (.0250"). . . . **$8.95**
#60934 Set of 4, #74 (.0225"), #76 (.0200"), #78 (.0160") and #80 (.0135"). . . . **$9.95**
#60935 Set of 4, 1/64", 1/32", 3/64", 1/16" **$9.95**

PRECISION CUTTING KNIVES FOR HOBBYCRAFTS, GRAPHIC ARTS AND HOUSEHOLD USE. ALL BLADES ARE CRAFTED OF THE HIGHEST QUALITY CARBON STEEL WITH HARD, SHARP POINTS & FINELY HONED CUTTING EDGES.

Precision Cutting Knives

A. NO. 1 KNIFE.
The world's best selling hobby, craft and graphic arts knife. Aluminum handle, 4-7/8" long. Includes one no. 11 blade.
#14349 . . . . . **$1.95**

B. NO. 2 KNIFE.
Larger diameter, slightly longer and heavier than the no. 1. Includes one no. 2 blade. **#14351** **$2.75**

C. NO. 5 KNIFE.
Contoured plastic handle with metal blade lock. 4-1/4" long. Includes one no. 24 blade. **#36117** **$3.60**

D. NO. 6 KNIFE.
4-3/4" solid aluminum handle for heavy pressure cutting. Hex handle prevents rolling. Includes one no. 24 blade.
#14352. . . . . **$5.50**

E. WOODCARVING KNIFE.
5 " plastic handle with metal blade lock. Includes one no. 101 blade.
#14368 . . . . . **$6.25**

Now Your Knife Blades Will Last Twenty Times Longer

New and Improved! One sharpener accommodates all the knives and blades listed below!

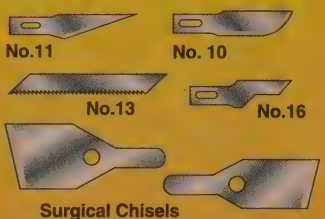
Patented saddle holds the blade at the exact sharpening angle for a razor-sharp edge in less than 10 seconds. Pays for itself many times over. Arkansas Whetstone sharpening block provides premium sharpening ability at reasonable cost. For use with knife handles Nos. 1, 2, 5, 6, and Soft Grip. Sharpens nos. 11, 16, 2, and 24 blades.

#81619 Knife Sharpener **$19.95**

#81620 Replacement Arkansas Whetstone **$9.95**

#60882 Special honing lubricant. Just a little on the whetstone helps clean away shavings and gives you the sharpest edge. 1/2 oz. dispenser bottle . . . **$3.95**

Use with Nos. 1 Knife

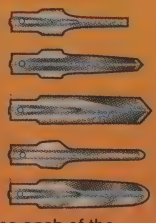


Surgical Chisels

#14360 No.11 Blade (15) **$3.95**
#14178 No.11 Blade (100) **$17.95**
#36102 No.10 Blade (5) **$2.95**
#50279 No.16 Blade (15). **$5.40**
#36106 No.13 Saw Blade (5) . . . **$2.70**
#80241 Surgical Chisel 5/8" wide (5). **$2.95**
#80242 Surgical Chisel 7/16" wide (5) **$2.95**

Use with Nos. 5 or 6 Knife

GOUGE ASSORTMENT

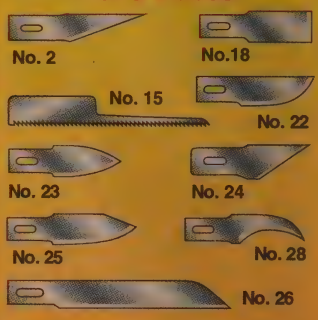


#36125 Includes one each of the above. **$8.95**

ROUTER ASSORTMENT

#36130 Includes one each of the above. **$12.95**

Use with Nos. 2, 5 or 6 Knives



#14362 No. 2 Blade (15). **$4.40**
#14363 No. 2 Blade (100). **$26.75**
#36110 No. 15 Saw Blade (5) . . . **$5.40**
#36111 No. 18 Blade (5) **$1.70**
#36113 No. 22 Blade (5). **$2.90**
#14364 No. 23 Blade (5) **$6.20**
#50280 No. 24 Blade (15). **$5.50**
#14365 No. 25 Blade (5) **$5.50**
#36115 No. 26 Blade (5) **$3.30**
#14366 No. 27,3" Saw Blade (5) **$4.55**
#14367 No. 28 Blade (5) **$8.20**

Use with Woodcarving Knife

#14369 No.101 Blade (2) . . **$2.95**

#14370 No.102 Blade (2) . . **$2.95**

#14371 No.107 Blade (2) . . **$2.95**

#14372 No.104 Blade (2) . . **$2.95**

#14373 No.105 Blade (2) . . **$2.95**

#14374 No.106 Blade (2) . . **$2.95**

Precision Knife Set

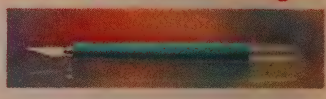
SAVE 51%!

Made in USA

A popular, all purpose knife set for modelers, miniaturists, woodworkers, graphic artists and household use. Includes light, medium and heavy duty blade holders, nos. 1, 2, and 5 handles and 13 assorted surgically sharp blades for unlimited cutting capabilities. Also includes an attractive wood storage case. At this price you can afford to have one for the office, one for the kitchen, one for the shop, and several for gift giving.

#60924 Precision Knife Set
Retail Value $20.35 . . . Our Price **$9.95**

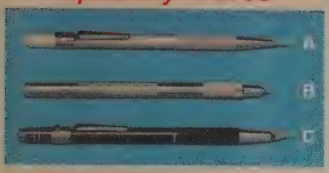
X2000 Knife Ends Fatigue



The X2000 knife has a large diameter, ergonomically-shaped handle that virtually ends fatigue because it takes much less finger pressure to grip the knife securely. The comfortably contoured, non-slip rubber gripping surface protects your fingers from the cutting edge. Includes a smooth-acting chuck for quick blade changes, anti-roll shape and snap-on cap. Available in four colors for easy identification. Uses same blades as no. 1 knife.

#81340 X2000 Knife-Royal Blue **$5.75**
#81341 X2000 Knife-Black **$5.75**
#81342 X2000 Knife-Cranberry **$5.75**
#81343 X2000 Knife-Teal (Blue/Green) **$5.75**
#81344 X2000 Knife Set (one each of four colors). . . . . List $23.00
Our Price **$19.65**

Hard-to-Find Specialty Knives



A. MICRO KNIFE.
Designed for delicate, close work demanding extreme accuracy. Blade retracts at the push of a button. Positive lock when open. Made of aluminum.
#36131 . . . . . **$10.50**
#36132 Replacement Blades (5) **$6.95**

B. SWIVEL KNIFE.
Blade rotates 360° for easy cutting of curves, circles & designs in light-weight materials like paper, film, acetate, stencils, cloth and balsa.
#14353 . . . . . **$5.75**
#14354 Replacement Blades (2) **$2.10**

C. X-CALIBRE KNIFE.
Fast becoming the knife of choice among professional model builders and graphic artists. Features an ultra-sharp, stainless steel blade that retracts into handle for safe portability. Beautifully made of black anodized aluminum. 4-7/8" long.
#50282 . . . . . **$12.95**
#50283 Replacement Blades (5) **$6.95**

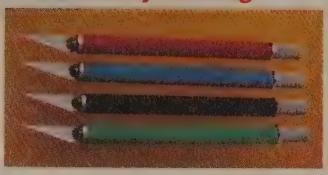
Cut Masking Tape into Narrow Strips and It Will Follow Any Curve

If you've ever tried to use masking tape on models or other small projects, you know that wide tape just won't follow compound curves without buckling. Our parallel cutter will cut tape down to 1/16" wide, quickly and accurately. You can also cut circles using one blade as a pivot. A precision tool of aluminum and brass with steel cutting blades.
#14295 Parallel Cutter. **$19.95**
#14296 Replacement Blades (2) . . **$2.95**

Amazing Protective Cutting Pad Heals Itself

Place on your workbench or even your dining room table and never worry about scratches or cut marks again. It actually heals itself instantly after each cut. Stays smooth after thousands of cuts and blades will last longer. Made of 3 ply, non-glare polyvinyl. Double sided for twice the life. You've got to try it to believe it.
#36133 8-1/2" x 12". **$12.95**
#36134 12" x 18". **$18.95**
#60511 3" x 4" *Try It* Size **$2.50**

Soft Grip Knife for Comfortable, All Day Cutting



The slightly soft vinyl covering on these knife handles acts as a cushion against your fingers and gives you a sure no-slip grip. The knurled, partially hex shaped blade release at the back end makes blade changes easier, quicker, safer and prevents rolling. Available in 4 colors so you can identify blade style even if you store your knives with the blade end down.
#70233 Red Soft Grip Knife **$2.95**
#70234 Blue Soft Grip Knife **$2.95**
#70235 Green Soft Grip Knife . . **$2.95**
#70236 Black Soft Grip Knife . . . **$2.95**
#70238 Set of 4, **SAVE $2.00** . . . **$9.80**

World's Smallest Wood Chisels

An incredibly small wood chisel set for fine inlay work, carving, marquetry, miniatures, models and electronic circuit board work. Includes aluminum pin vise holder, 2 right hand and 2 left hand, single bevel skew chisels; 2 double bevel skew chisels; 1 square cut chisel (1/16" cutting width); 1 diamond point chisel and hinged plastic storage case.
#14294 Chisel Set **$9.95**

Surgical Scalpels... the Ultimate Cutting Tools

This genuine surgeon's scalpel is excellent for fine intricate cutting in model making, graphic arts, craft and lab work. Stainless steel handle holds interchangeable blades made of surgical grade steel. Set includes handle and two each of 4 blades shown.

#50281 Scalpel / Blade Set **$8.95**

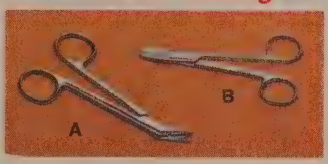
Scalpel Blades, package of 5
a. #14570 #11 blade . . . . . **$2.75/pkg.**
b. #14571 #10 blade. . . . . **$2.75/pkg.**
c. #14572 #12 blade. . . . . **$2.75/pkg.**
d. #14573 #15 blade. . . . . **$2.75/pkg.**

#80421 Super Grip handle for scalpel blades. A "fatter" handle that fits more comfortably in your hand. Textured at the working end for a no-slip grip. Made of stainless steel and plastic. 4-3/4" long. Blade not included. . . **$3.95**

Stainless Steel Mini Straight Edge Protects Your Fingers

Cutting a straight line with a knife is easy and safe with our knob-held stainless steel straight edges. They're just the right size for hobbies, crafts and graphic arts work.
#14162 6" long x 2" wide x 3/32" thick **$12.95**
#60916 12" long x 2" wide x 3/32" thick **$18.95**

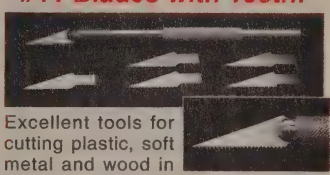
Mini Shears for Precision Cutting



A. #14478 Universal Shear
A beautifully made miniature shear for intricate cuts in sheet metal (up to .025"), plastic sheet, fiber, cloth, rubber, cardboard, etc. Also has special notch for cutting wire up to 3/64" dia. Angled jaws keep hands away from material being cut. 4" long handles for extra leverage. Made of stainless steel for a lifetime of use. 4-3/4" long overall. **$6.95**

B. #30101 Jeweler's Mini Tinsnips
Cutting intricate shapes in metal is a pleasure with this precision cutting tool. Made of the finest quality stainless steel polished to a rich luster. Will also cut wire and other thin materials. Approximately 4" long. **$4.95**

Micro Saws... #11 Blades with Teeth!



Excellent tools for cutting plastic, soft metal and wood in tight places and when a knife blade just won't cut it. Set includes 6 blades...two .010" thick x 40 tpi; two .010" thick x 30 tpi; and two .015" thick x 24 tpi...and 5" long aluminum handle. Blades are made of premium quality steel.
#14345 Micro Saw Set **$8.95**

MICRO SAW BLADES
#14346 .010" x 40 tpi, 2/pkg. . . . . **$2.20/pkg.**
#14347 .010" x 30 tpi, 2/pkg. . . . . **$2.20/pkg.**
#14348 .015" x 24 tpi, 2/pkg. . . . . **$2.20/pkg.**

Industrial Quality Razor Blades

Our industrial quality razor blades are a cut above any you've ever used. They'll hold their finely honed cutting edges far longer than ordinary blades. Made of high carbon surgical steel with aluminum backs. Once you use these you'll never go back to hardware store quality. Packed 100 blades in a convenient dispenser box.

#14292 RazorBlades. Pkg.of 100 . . **$10.95**

Side Opening Safety Handle for Single-Edge Razor Blades

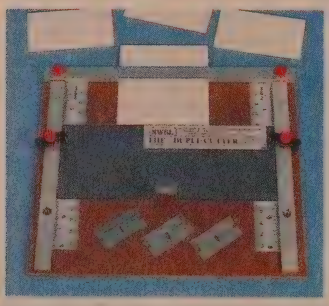
Unlike other handles that may allow blades to slip out, ours has a special flip-down door that securely holds the blade while cutting. The large, comfortable handle also eliminates the danger of holding blades with your bare fingers and is especially good for chop cutting of wood strips and stringers. Includes one blade.

#81840 Side Opening Handle . . **$4.95**
2 or more **$4.15 ea.**

"I have always been impressed by your attention to detail and fast service..."

Robert S.
Cypress, Fl.

The Duplicutter Cuts Parts to the Exact Same Size



Designed for modelers working in sheet plastic, the Duplicutter works just as well on thin wood sheets, card stock and paper. It squares the part, clamps it tightly while cutting and allows you to make exact same-size duplicates easily. Use for structure and rolling stock sides, window panes, etc. Accepts sheets up to 6-3/4" wide. Use with razor blades supplied or any hobbycraft knife. Optional stick-on ruler shown is not included. Order below.

#81028 Duplicutter **$24.95**
#80798 Stick-On Mylar Ruler **$3.95**

NEW! Tweezer-Like Nipper Desprues the Tiniest Parts

A gentle squeeze is all that's required to safely separate even the tiniest molded part from its sprue. Finely-ground double-honed tips reach into the tightest locations and flush cut the plastic so that further clean-up is not required. Custom made for Micro-Mark of the highest-quality satin finish stainless steel. For use on plastic sprues only.

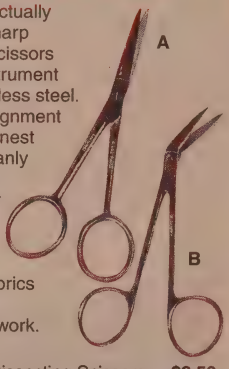
#82393 Despruing Tweezer . . . **$14.95**

The "Gripster" Grabs It with the Push of a Button

Press the top of this unique tool and slim, stainless steel prongs emerge from the tip. Release pressure and the prongs close around the object, gripping it tightly. Position, insert or start hard-to-hold screws, nuts and small parts easily. 5" long overall. Prongs open to 5/8".

#21116 The "Gripster" . . . **$4.95**

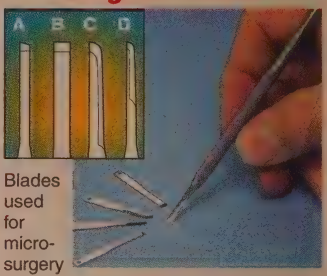
Stainless Steel Scissors for a Lifetime of Use



These are actually surgically sharp dissecting scissors made of instrument quality stainless steel. Precision alignment cuts the thinnest material cleanly to the tip. Excellent for decoupage, ship model rigging, miniature fabrics and other needlecraft work. 4-1/2" long.

A. #14177 Dissecting Scissors . . **$6.50**
B. #81869 Matrix Scissors **$6.50**

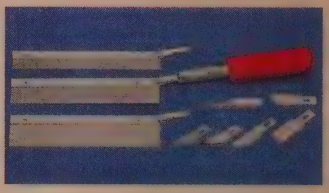
Micro Knife Handle Holds the World's Smallest Surgical Blades



Blades used for micro-surgery are held in a super thin knife handle only 4-1/4" long x 3/16" dia. Use for cutting, carving and chiseling the smallest details on models, dollhouse furniture, duck decoys and other scale model projects. Handle is stainless steel with a slip-proof knurled grip. Blades are shown actual size.

#81067 Knife handle with 1 of each blade shown. **$9.95**
A. #81084 #61 Blade, pkg. of 5 . . **$3.95**
B. #81085 #62 Blade, pkg. of 5 . . **$3.95**
C. #81086 #67 Blade, pkg. of 5 . . **$3.95**
D. #81087 #67M Blade, pkg. of 5 **$3.95**

Deluxe Razor Saw/Knife Set



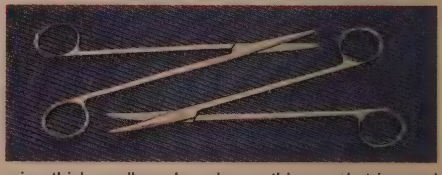
A complete set of razor saws, with tempered, nickel-plated steel blades, makes fine cuts in wood, plastic and non-ferrous metals. Includes no. 5 knife handle, one 3/4" x 5" x 42 tpi blade, one 1" x 5" x 42 tpi blade, one 1-1/4" x 5" x 24 tpi blade, one no. 15 keyhole saw blade, and 5 assorted knife blades.

#50284 Razor Saw Set **$12.95**
#22118 Extra-fine Blade, 1-1/4"x 5"x 54 tpi **$3.25**

Replacement Razor Saw Blades:

#81860 3/4" x 5" x 42 tpi **$2.75**
#81861 1" x 5" x 42 tpi **$2.85**
#81862 1-1/4" x 5" x 24 tpi **$2.95**

Long Handled Scissors Give You Extra Cutting Leverage for Tough Materials



Most scissors that will cut tough materials are too big to make tight, intricate cuts. These will do both because they have long handles for leverage and short blades for cutting. They'll cut plastic, rubber, thin gauge sheet metal, soft wire, thick cardboard, and even thin wood strips and veneers. (The curved scissor is perfect for cutting plastic R/C car bodies). Made of no-rust stainless steel. 7" long overall with 1-1/4" long cutting portion.

#60722 Extra Leverage Scissors, Straight **$7.95**
#60723 Extra Leverage Scissors, Curved **$7.95**
#60724 Set of Both Scissors **$12.95**

KNIFE AND TOOL SETS MAKE APPRECIATED GIFTS FOR ANYONE ON YOUR LIST

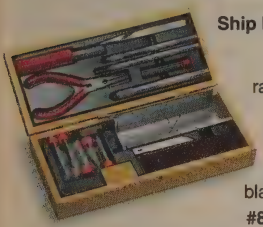
All sets include an impressive wooden chest with fitted tray.

Railroad Modeler's Deluxe Tool Chest
Includes: 6" stainless steel rule, 2 needle files, razor saw, sanding stick, swiss hammer, snap knife, needle nose plier, swivel head pin vise, slotted and Phillips head miniature screwdrivers, 3 drills, #1 knife handle, #5 knife and razor saw handle, aluminum miter box, 3 knife blades and fitted wooden chest.

#81501 Railroad Modeler's Set. List $58.99 Our Price **$44.95**

Dollhouse/Miniaturist's Deluxe Tool Chest
Includes: #1 knife handle, #5 knife and razor saw handle, swivel head pin vise, aluminum miter box, razor saw, sanding block and wedge, scribing awl, sanding stick, slotted miniature screwdriver, 1 large and 1 small modeler's clamp, 6" stainless steel rule, 3 drills, 3 knife blades and fitted wooden chest.

#81503 Dollhouse Modeler's Set. List $45.99 Our Price **$34.95**



Ship Modeler's Deluxe Tool Chest
Includes: #1 knife handle, #2 knife handle, #5 knife and razor saw handle, scribing awl, needle nose plier, aluminum miter box, tweezers, sanding block and wedge, razor saw, 3 drills, 4 gouges, 15 knife blades and fitted wooden chest.

#81504 Ship Modeler's Tool Set.
List $51.99 . . . . . .Our Price **$38.95**

Deluxe Knife & Tool Chest
Includes: #1 knife handle, #2 knife handle, #5 knife and razor saw handle, snap knife, 2 routers, razor saw blade, #26 blade, #15 blade, 2 carving gouges, 5 assorted knife blades, aluminum miter box, sanding block and wedge, slotted and Phillips head miniature screwdrivers, scribing awl and fitted wooden chest.

#81502 Deluxe Knife/Tool Set. List $42.99 Our Price **$32.95**

Museum Quality Display Cases

Our beautiful display cases protect your valuable investments from dust, damage and curious fingers. Manufactured of the highest quality materials and designed to complement your finest home and office furnishings. Display your creativity and collectables with pride. Order your display case today.

Ready-to-use. Designed primarily for model railroad rolling stock. Also suitable for auto, aircraft and military models. Covers are 1/8" thick crystal clear acrylic with edges carefully welded and polished for a truly professional look. Bases are 3/4" solid oak or walnut, finished to furniture quality standards. Cases for HO scale are 2-3/4" wide x 3-1/4" high inside. Cases for O scale are 3-3/4" wide x 5-1/2" high inside.

STOCK SIZES

OAK ITEM #	PRICE	WALNUT ITEM #	PRICE	TRAIN SCALE	INSIDE LENGTH
81421	$32.95	81422	$36.95	HO	10-5/8"
81423	$41.95	81424	$44.95	HO	13"
81425	$48.95	81426	$52.95	HO	16-1/2"
81427	$60.95	81428	$63.95	HO	22"
81429	$54.95	81430	$58.95	O	18"
81431	$70.95	81432	$78.95	O	28"
81435	$92.95	81436	$103.95	O	38"
81472	Custom sizes. See below.				

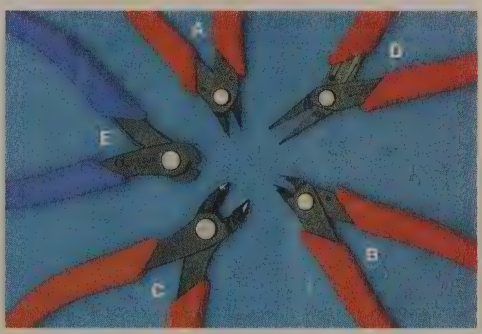
#82455 Display Case Cleaner/Polish. 8 oz. spray bottle . . **$4.45**

CUSTOM MADE CASES

We can custom make almost any size case. Please call or write for price quotation.

For all custom cases, order item **#81472.** Indicate size in the "name of item" column on your order form. **Custom case orders can be accepted by mail or Fax only. Order carefully. Custom cases are not returnable. Note:** UPS shipments only on all custom cases and no COD's. Allow 3-6 weeks delivery for all cases.

Xuron Pliers... Aerospace Precision at Economical Prices



The Xuron Corporation has been manufacturing precision pliers for the electronics and aero-space industries in Saco, Maine, since 1970. All Xuron cutters feature their patented blade by-pass shearing action instead of the compression cut of standard cutters. This shearing action is made possible by the use of ultra-precision computer controlled grinders. That's why they cut so clean, square and close with half the effort of compression type cutters. Made of hardened steel with soft rubber grips and spring return.

A. #80333 HIGH PRECISION MICRO SHEAR.
This all-purpose cutter not only cuts soft wire up to 20 gauge copper, but also plastic, paper, mylar, fabric and thread. It will even cut a single human hair! Ideal for cutting plastic model parts from molding sprues. 5" long. . . . **$9.95**

B. #80334 ANGLED HIGH PRECISION MICRO SHEAR.
Like #80333, but with a 55° angled cutter head for hard-to-reach locations. **$15.95**

C. #80337 TRACK CUTTER.
Cuts model railroad track up to HO gauge clean and square with much less effort than other cutters. 6" long. **$11.95**

D. #80338 TWEEZER NOSE PLIER.
Six separate milling operations on each nose insure the blades match precisely in size, shape and alignment.This plier combines the precision to pick up a human hair with the strength required for wire forming operations. Smooth, non-serrated jaws. 5-3/8" long **$15.95**

E. #80999 HARD WIRE CUTTER.
Cuts hardened music wire up to 1/16" diameter. Also cuts twisted aircraft cable. 5-1/2" long. **$16.95**

BEST BUY! SAVE $6.50

#81048 Set of All Five Xuron Pliers **$64.25**

Static Grass

Grass-colored fibers that tend to stand up when applied to scenic terrain. Truly realistic! 1 quart shaker bottles. . . . . **$8.59 ea.**
2 or more, Mix or Match **$7.25 ea.**

#82361 Wild Honey
#82362 Harvest Gold
#82363 Burnt Grass
#82364 Light Green
#82365 Medium Green
#82366 Dark Green

Foliage

Ground-foam-impregnated stretchable gauze that simulates vines and tree foliage. 60 sq. in. . . **$3.29 ea.**
2 or more, Mix or Match **$2.80 ea.**

#81693 Early Fall
#81694 Late Fall
#81695 Light Green
#81696 Medium Green
#81697 Dark Green
#81698 Conifer Green

Clump Foliage

Clusters of ground foam for shrubs and undergrowth. Apply with Scenic Cement. 3 quart package . . . . . **$11.98 ea.**
2 or more, Mix or Match **$10.20 ea.**

#80984 Light Green
#80985 Med. Green
#80986 Dark Green
#80987 Fall Mix

Turf

Ground foam that simulated earth and low growth vegetation. 1 quart shaker bottles in fine, coarse and blended textures.
$8.59 ea. . . . 2 or more, Mix or Match **$7.25 ea.**

#82346 Fine Earth
#82347 Fine Burnt Grass
#82348 Fine Green Grass
#82349 Blended Green
#82350 Blended Earth
#82352 Coarse Fall Rust
#82353 Coarse Burnt Grass
#82354 Coarse Light Green
#82355 Coarse Medium Green
#82356 Coarse Dark Green

Poly Fiber

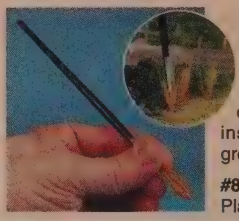
Sprinkle turf on balls of Poly Fiber, then glue to background areas to create the appearance of large expanses of forests. Expanded **double pack** contains approximately 1 gallon by volume. Medium green color.

#81315 Poly Fiber. . . . . **$4.98 ea.** . . . . . 2 or more **4.25 ea.**

Field Grass

A natural hair product used to model tall grass, field grass and weeds. To use, simply cut small batches to desired length. Plant with special tools shown below. 8 grams/pkg. . . . . **$2.98 ea.**
2 or more, Mix or Match **$2.55 ea.**

#81699 Natural Straw
#81700 Harvest Gold
#81701 Light Green
#81702 Medium Green



Field Grass Planting Tool

Plants field grass quickly and easily. Includes illustrated instructions. Works fast–works great!

#81751 Field Grass Planting Tool **$4.95**

Tree and Shrub Kits

Each package contains, bendable cast metal or bendable plastic one-piece trunks with bark texture and branches, pre-colored foliage material and complete instructions. No two trees ever look alike, because you design each tree yourself. You bend the branches, shape the tree, paint the bark and position the foliage. This variation adds the ultimate in highly detailed realism to model railroads, architectural models, dioramas and dollhouse landscaping.

Metal Trunk Tree Kits

LARGE TREE PACKS . . . . . **$10.98 ea.** . . . . . 2 or more, Mix or Match **$9.35 ea.**

#70084 Pine Trees (5), 6" to 9" tall.
#70086 Hardwoods (3), 5-1/2" to 6-1/2".
#70087 Big Old Trees (2), 7" to 7-1/2".
#70085 Hedge Row Scene. 18 small trees, 6 bushes, 3 colors of foliage and 2 colors of turf...enough material to construct a hedge row 24" to 30" long.

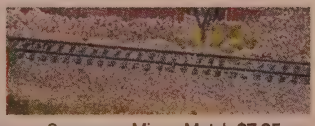
BEST BUY ASSORTMENTS . . **$11.98 ea.** . . . 2 or more, Mix or Match **$10.20 ea.**
#70080 Hardwood Forest. 24 trees, 2" to 4" tall.
#70082 Pine Forest. 24 trees, 2" to 4" tall.

Plastic Trunk Tree Kits

$14.98 ea.
2 or more, Mix or Match **$12.75 ea.**

#81031 Hardwoods (36 trees), 3/4"-3" tall.
#81032 Hardwoods (14 trees), 3"-5" tall.
#81033 Hardwoods (7 trees), 5"-7" tall.
#81034 Pines (42 trees), 2-1/2"-4" tall.
#81035 Pines (24 trees), 4"-6" tall.
#81036 Pines (16 trees), 6"-8" tall.

Ballast (Stone/Gravel)

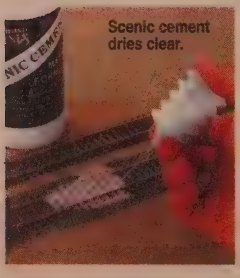


Ballast model RR track and simulate gravel roads. 1 quart shaker bottles . . **$8.59 ea.** . . 2 or more, Mix or Match **$7.25 ea.**

#82358 Fine Gray Blend
#82359 Medium Gray Blend
#82360 Coarse Gray Blend

Rock Debris (Talus)

Includes one pack each of fine, medium, coarse, and extra coarse. 3 quarts total.
#80995 . . . . **$11.98**
2 or more **$10.20 ea.**



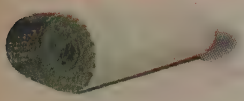
Bellows Applicator Use with scenic cement to bond ballast, turf, foliage, and rock debris to your landscape. Package of 2.
#60363A **$4.95**

Scenic Cement Ready to use water base cement. Spray, flow or brush on. Dries to a clear, matte finish. 16 oz. bottle.
#70063 . . . . . **$5.98 ea.**
2 or more **$5.10 ea.**

Scenic Sprayer Spray head fits Scenic Cement bottle. Nozzle adjusts from fine mist to steady stream. Includes 8 oz. bottle.
#70064 . . . . . **$3.49 ea.**
2 or more **$2.95 ea.**

Hob-e-Tac A super sticky glue for making trees and for attaching foliage. 2 ozs.
#80994 . . . . . **$4.98 ea.**
2 or more **$4.25 ea.**

Plaster Cloth



Dip pieces of Plaster Cloth in water and drape over crumpled newspaper to make a durable shell for scenery. One roll 8" wide x 5 yards long.

#80526 . . . . . **$6.98**
2 or more **$5.95 ea.**

Lightweight Hydrocal

Nearly half the weight of regular Hydrocal and goes almost twice as far. It's tough and sets up much harder than plaster. Use for casting rocks and other items using latex rubber or RTV silicone molds. 1/2 gal.

#80524 . . . . . **$7.98** . . . . . 2 or more **$6.80 ea.**

Earth Color Kit

A simple method for coloring rocks, portals and other terrain details made of Hydrocal. Set includes eight 1oz. bottles of water soluble colors, palette, applicator and instructions.

#80528 . . . . . **$15.98**
2 or more **$13.60 ea.**

Snow

NEW!

Sprinkle in place; secure with Scenic Cement. 1 quart shaker bottle.

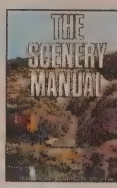
#82357 . . . . . **$8.59 ea.** 2 or more **$7.25 ea.**

"The Clinic" Video

Step-by step, detailed instructions for the use of plaster cloth, rock molds, turf, foliage, field grass, Hydrocal, earth colors and more. VHS, 75min.

#81107 Scenery Clinic Video . . **$24.95**

Scenery Manual



A comprehensive, illustrated how-to guide for all landscape and terrain products we sell. Covers the basics as well as many revolutionary new techniques.

#80550 . . . . . **$9.98**

Complete Landscape Kit

#79088 Starter set includes 18 different trees (2"-4" tall), 7 tree stumps, 36 cu. in. of green blend grass, 8 oz. in packs of turf in accent colors and instruction sheet

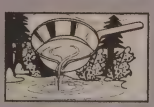
$34.50 Value if purchased separately

NOW ONLY $22.98 ea. 2 or more **$19.55 ea.**

E-Z Water

Heat plastic pellets and pour into place. 16 oz. volume.

#80527 . . **$8.98** . . 2 or more **$7.65 ea.**

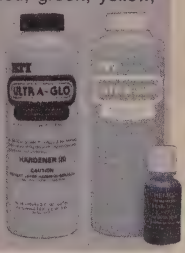


Create Realistic Water with Easy-to-Use Resin

This epoxy resin lets you create water that looks wet, deep and like it's flowing. It has little odor and cures clear and hard, not tacky. Just mix equal quantities of part A and B and pour. Pot life: 15 min. Full cure in 24 hours. For more realism and depth, add 3-6 drops of color dye to each 8 oz. of resin. Instructions included. (Resin shipped via UPS ground only).

#80347 Resin, 8 oz. **$9.95**
#80348 Resin, 16 oz. **$16.95**
#80349 Resin, 32 oz. **$25.95**

#80351 Set of six, 1/4 oz. bottles of transparent dyes: Red, green, yellow, blue, amber, and pearl with informative color blending chart **$10.95**



#80352 Mixing Set. Includes 6 plastic cups with printed markings, 6 stir sticks, 3 brushes . . . **$4.95**

How-To Videos Can Make You a Scenery Expert

Dave Frary reveals his secrets for creating the world's most realistic miniature scenery for model railroad layouts, landscaped dollhouses or military dioramas. Become a scenery expert with almost 2 hours of entertaining instruction you'll want to watch over and over.

#81282 Volume I - Takes you from a plain piece of plywood to a landscaped scene of hills and rock outcroppings. Covers: base assembly, lightweight support of scenic materials, rubber mold rock casting, creation of rock formations, texture and color. VHS, 50 mins **$19.95**

#81283 Volume II - A continuation of Volume I. Covers: applying dirt, grass and other ground textures, road building, making trees, weeds and other vegetation, simulating water, placement of structures and details, weathering, ballasting track and final finishing. VHS, 60 minutes **$22.95**

#81324 Best Buy! Save $5.00 Two Volume Set **$37.90**

Make Your Own Molds with Liquid Latex Rubber

GREAT FOR MAKING ROCK MOLDS!

You can duplicate just about anything with our liquid latex rubber. Just brush 4 or 5 coats of the liquid rubber on the original. After it cures, just peel off the flexible rubber from the original and pour lightweight Hydrocal into the mold you have created. Once the Hydrocal has cured, you won't be able to tell the duplicate from the original. Ideal for model railroads and dioramas.

#80384 Liquid Rubber, 16 oz. **$9.95**
#80385 Liquid Rubber, 32 oz. **$15.95**

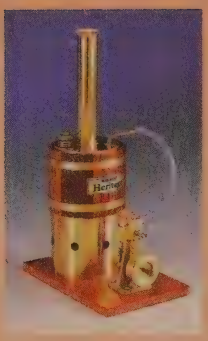
Video Teaches You Model Structure Painting and Weathering

In this video, expert modeler Dave Frary demonstrates his proven techniques so you, too, can create prize winning finishes on model structures. Dave teaches you to:

• select, mix and prepare paints for brush and airbrush application • apply paints to plastic, plaster, resin and wood models • stain walls, stonework and trim • master airbrush painting • weather your model with paint • clean and care for brushes • select and use compressors • store paint properly • clean and care for airbrushes. Included with video are paint mixing formulas and a list of required tools and materials.

#81390 How to Paint Model Structures VHS, 60 minutes . . **$24.95**

Enjoy the Thrill of Live Steam



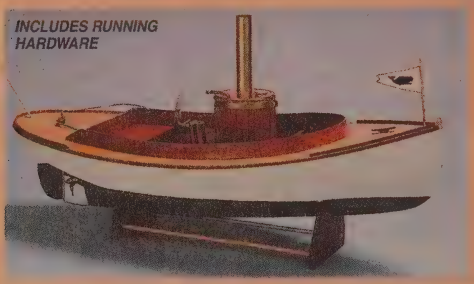
An operating live steam engine brings a great thrill not only to the person who built it, but also to the people who watch it run. This beautiful Steam Engine kit utilizes brass, copper and zamak components for the boiler and engine, plus wood parts for the boiler wrapper and 3" x 5" mahogany base. Runs for 10 to 15 minutes on one fueling of sterno. Assembly requires soldering with a torch. The perfect power plant for the Launches sold below. Made by Midwest.

#82241 Model VI Steam Engine Kit
List $79.95 . . . . . Our Price **$69.55**

#82391 Heritage Steam Engine Kit. Same as above, but with assembled boiler and assembled brass engine. Simple screwdriver assembly (*no torch required*).
List $129.95 . . . . . Our Price **$113.75**

Steam Powered Launches Put Your Engine to Work

When steam was a popular form of propulsion, boats like the Fantail Launch II and Elliott Bay Launch were used on lakes primarily as pleasure craft for the rich and famous. These kits were designed expressly for use with the Steam Engines sold above. A great way to experience the fascinating fun of live steam power. Made by Midwest.



#82242 Fantail Launch II
Features Micro-Cut quality wood and simplified hull construction utilizing balsa sheeting. Includes cast fittings and all running hardware. Length: 19", scale 1/12.
List $77.95
Our Price **$67.95**

#82420 Elliott Bay Steam Launch
Features vacuum-formed plastic hull and canopy, with real mahogany trim and fabric covered seats, cast fittings and all running hardware. Length: 25", scale 1/12.
List $149.95
Our Price **$129.95**

Special Offer!

Buy the Steam Engine and Launch kits together and save 20%

#82246 Fantail Launch with Model VI Steam Engine
List $157.90 . . . . . Our Price **$126.35**

#82403 Fantail Launch with Heritage Steam Engine
List $207.90 . . . . . Our Price **$166.35**

#82437 Elliott Bay Launch with Model VI Steam Engine
List $229.90 . . . . . Our Price **$183.95**

#82438 Elliott Bay Launch with Heritage Steam Engine
List $279.90 . . . . . Our Price **$223.95**

HO Scale Thomas Point Lighthouse Kit

The Thomas Point is the only screw-pile lighthouse standing in its original position in Chesapeake Bay. This great new kit by Precision Lasercraft has laser-cut walls, windows, doors, roof panels and decks, plus etched brass railings, a styrene and metal support structure and cast-metal detail parts. Tab-and-slot construction, color photos, detailed drawings and complete instructions make assembly easy. Also includes an electronic beacon flasher with power supply. 6" dia. x 7" high.

#82233 Thomas Point Lighthouse
List $100.00 . . . . . Our Price **$89.95**

Model Maker's T Pins

Used by model builders to hold parts together while glue dries. Also a handy aid for use on dollhouse miniatures and all types of fabric crafts. "T" head makes pushing easy. Nickel-plated steel. 1-1/4" long x .035" diameter. 50 pcs. per package.

#14318 "T" Pins **$3.25**

The "Distresser" Adds a Realistic, Weatherbeaten Finish to your Models

When you rub the Distresser's steel bristles across the surface of your model, it abrades the painted surface and makes it look like it's been exposed to the elements for a long time. Distresser's bristle length is adjustable just like the lead in a mechanical pencil... set it short for heavy weathering; long for light weathering. Creates one of the most realistic finishes we've seen on painted wood models.

#82466 Distresser Weathering Brush **$9.95**

#82467 Brush Refills (3) . . **$3.50**

Mod'lers Mastic™ Modeling Compound Simulates Metal, Wood and Plastic

Mod'lers Mastic has the consistency and workability of modeling clay and can be molded, sculpted, wrapped around forms or used for building-up and repairing figures, fittings, ship hulls, airplane fuselages, dollhouse trim, etc. When cured, this two-part epoxy compound simulates the density, texture and color of real metal, wood and semi-rigid plastic. Parts A and B are co-extruded one around the other; to start the curing cycle, simply cut off a piece and knead to a uniform color. Smooth with water. Hardens in approximately 45 minutes; final cure after 24 hours. Each package contains 4.25 cubic inches.

#82097 Mod'lers Mastic-Metal. Working time: 5-7 minutes. After final cure, looks like cast aluminum and can be drilled, tapped, machined, ground or filed . . **$9.95**

#82098 Mod'lers Mastic-Wood. Working time: 15-20 minutes. After final cure, has the density and appearance of wood and can be drilled, sawn, filed, sanded, painted or stained. **$9.95**

#82099 Mod'lers Mastic-Plastic. Working time: 20-25 minutes. Contains a fading blue die. After final cure, has the density and appearance of semi-rigid light gray plastic. **$9.95**

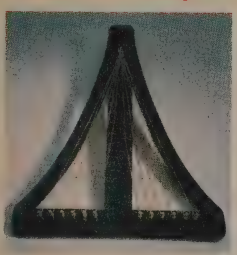
#82100 Mod'lers Mastic Set.
Includes one each of the above.
Save $5.00! **$24.85**

Ship Modeler's Plank Forming Jig

Bending ship model planking strips before assembly eliminates complicated clamping fixtures, saves time and money due to broken planks and assures neat, tight fitting joints. How it works: one row of adjustable nylon formers are arranged to the shape of the bend you need. Planks are then soaked in hot water for several minutes to make them pliable. Then they're placed against the first row of formers. The second row of formers is then slid up against the planks to hold them tightly in place. Remove the planks when they're dry. They'll be permanently formed to your predetermined curve. Form up to 5 planks at a time by stacking one atop the other as shown. Made of water resistant acrylic with 10 nylon formers and cap nuts, zinc plated screws and no-slip silicone rubber feet. Approx. 5" x 5" with 1" high nylon formers.

#60663 Plank Forming Jig **$19.95**

Loom-A-Line Makes Ship Model Rigging Fast, Neat and Easy



Our shroud and ratline rigging jig gives your model a professional appearance with perfectly spaced lines, equal line tension and neatly tied knots. And since you assemble off-the-model you lessen the chance of damage to parts already installed. Made of high impact plastic with 30 brass studs.10" x 8". Instructions included.

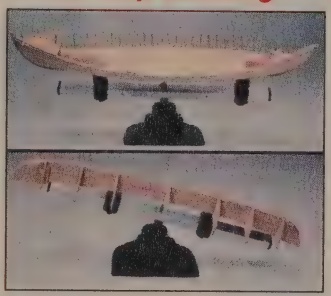
#60529 Loom-A-Line
List $22.50. . . Our Price **$16.95**

Ship Modeler's Rigging Scissors

These are actually surgical scissors for removing stitches. The hook shaped jaw lets the surgeon get under the suture thread for safe and easy cutting. You'll like the way the hook shape holds and positions rigging cord for trimming. Made of surgical quality stainless steel. 4-1/2" long. An excellent tool for needlecraft work as well.

#60397 Rigging Scissor **$6.95**

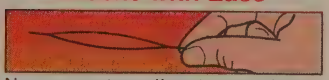
The Best Vise You Can Own for Ship Modeling



From hull construction to final rigging, our ship modeler's vise adjusts your model to the right angle for easy access to all components. Will hold both plank-on-frame and solid hull models by the keel. Will also hold plank-on-frame models by the bulkheads for "upside-down" planking. Cast aluminum base with ball swivel lets you tilt and turn your model to any position. Molded nylon vises hold keels or bulkheads up to 1/2" thick and are adjustable along the aluminum bar to accommodate almost any size model. Can be mounted to workbench with wood screws (not included) or with C clamps (included). Aluminum bar is 15" long.

#60530 Ship Modeler's Vise
List $79.95 . . Our Price **$64.95**

"Big Eye" Threads Needles, Deadeyes and Blocks with Ease



No more struggling to get thread through all those tiny holes when building ship models. The pointed end pierces fabric, so it's also a great tool for rigging sails. 2" long. Eye opens to 1/4".

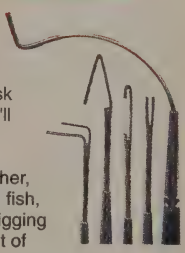
#81009 Big Eye (Set of 3) **$4.95**

Plank Bending Tool for Ship Models, Dollhouses, Dioramas

This well designed tool will bend wood strips without special fixtures, hot irons or soaking in water. One jaw is ground to a triangular edge, the other is flat. When you place a strip of wood between the jaws and squeeze the handles, the triangular jaw crimps a V shape into the back side. Since the other jaw is flat, the opposite side of the strip stays smooth. And since there's a slight gap between the jaws, you get the right amount of compression automatically. The curve you get depends on how far apart you put the crimps. It's the quickest and easiest way we know to bend ship model planking. Can also be used for dollhouses, dioramas and anytime you need a curved strip of wood, soft plastic or cardboard. Handles stock from 1/32" to 3/32" thick x 3/4" wide x any length.

#60379 Plank Bending Tool
List $19.95. . Our Price **$16.95**

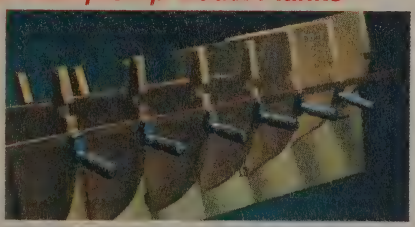
Miniature Fingers for Ship Modelers



This set of rigging tools makes ship modeling's most difficult task a lot easier. You'll be able to retrieve, hook, position, tie, gather, maneuver, hold, fish, pull and reach rigging lines on any part of your model. Slim, 7" long handles keep your fingers away from shrouds, stays and other lines already installed so you won't have to retighten lines and make repairs. Especially useful for tying lines to belaying pins, cleats, bitts and eye bolts. Steel shanks are set in smoothly sanded and lacquered artist brush handles. Tools can also be used as soldering aids and for positioning miniature items in the dollhouse.

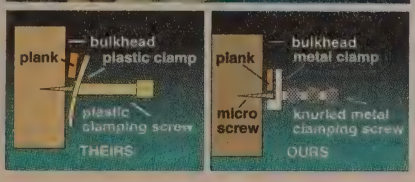
#60378 5-Pc. Rigging Tool Set **$19.95**

The Best Way to Clamp Ship Model Planks

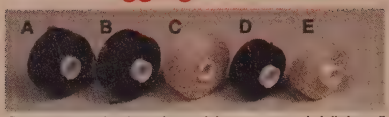


These all-metal planking clamps hold ship model planks tight against the bulkhead until glue dries. The unique stepped clamp design holds the plank against its full surface so you'll get neater, tighter fitting joints, and the knurled metal finger grip makes turning a lot easier. The micro-size wood screw is cast into the finger grip and will hold in bulkheads as thin as 1/8". 1-1/4" long x 1/4" dia. Set of ten.

#60926 Planking Clamp Set **$12.95**
2 or more sets . . . . **$10.95 ea.**



Model Ship Rigging Thread



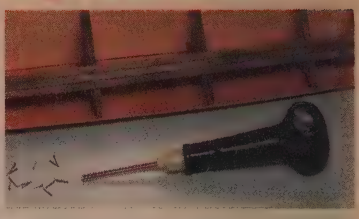
Our cotton rigging thread has a special "glace" finish that removes unsightly fuzz. It's realistic looking, cuts clean, won't unravel and stays taut.

$2.95 each

Mix or match 3 or more: only $2.25 each

FIG	ITEM	COLOR	GAUGE	O.D.	STRANDS	LENGTH
A	82234	Black	#10	.022"	4	30'
B	82235	Black	#20	.010"	4	90'
C	82236	Natural	#20	.010"	4	90'
D	82237	Black	#30	.008"	4	105'
E	82238	Natural	#30	.008"	3	105'

Ship Modeler's Push Hammer Cuts Planking Time in Half



Other ship modeler's push hammers can't compare. In fact, the others we tested bent the nails more times than they didn't! Ours perform flawlessly every time. To use, simply insert nail head-first into barrel and push. Selected specifically for brass and steel ship modeler's nails with head diameter up to 1/16" and 1" long. Comfortable, blunt end design makes pushing with your palm easier and more accurate. 6" long overall. Metal barrel and magnetic plunger. Molded plastic handle. Also an excellent tool for laying model railroad track.

#60306 Micro Nail Push Hammer **$9.95**

90° Punch Makes Corner Cutting Easy

This ingenious tool cuts a perfect 90° corner in wood and plastic. It's ideal for cutting window and door openings in model siding and structural materials. Simply mount the punch in your drill press and pull the handle. Or, just tap the punch with a hammer. Step and repeat the operation, and your job is complete with improved accuracy in 1/10th the time. Also good for cleaning out routed corners, trimming dollhouse openings, cutting square holes for model airplane construction...and any time a precise 90° corner is needed. Made of tool steel with razor-sharp cutting edges. Can be resharpened easily on any honing stone. 2-1/2" long.

#81652 5/16" cutting edges, 1/4" dia. at the holding end. . . . **$22.95**

#82394 3/16" cutting edges, 3/16" dia. at the holding end. . . **$20.95**

Precision Panel Meters Monitor Your Model Railroad's Performance

Use these panel meters to measure the voltage output of your power supply and the current draw of your locomotives' motors. Our "center-zero" design provides accurate measurements no matter which way the direction switch is set. Instantly detects shorts, motor overloads, poor wheel-to-rail contact, and current draw of illuminated cars. Wiring is simple...all connections are external to your power pack. Includes easy-to-follow wiring diagrams and panel cut-out template. For use with all DC scales, Z through G. Meter face is 2-1/4" w x 1-3/4" h; protrudes 7/16" from panel. Not for use with DCC systems or AC systems like Lionel.

#82144 DC Voltmeter, 20-0-20 . . . . . **$19.95**

#82145 DC Ammeter, 5-0-5 . . . . . **$19.95**

#82146 Best Buy! Save $5.00 Set of one each of above **$34.90**

Bright Bar Removes Tarnish and Rust

Abrasive impregnated rubber bar cleans model railroad track for better electrical conductivity. Also removes rust and tarnish on all metals and deglosses plastic gently. 2" x 3" x 3/4". 240 grit.

#80437 Bright Bar **$5.95**

Our Wheel Cleaner Assures Exceptional Performance from Your HO Locomotives

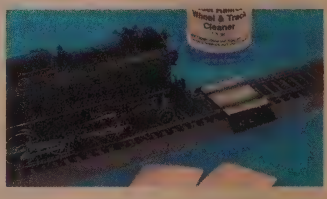
If you want smooth, stall-free performance from your model trains (and who doesn't?), your locomotive wheels must be kept clean in order to make good electrical contact with the rails. Our loco wheel cleaner safely removes accumulated crud from locomotive drivers without creating dirt-collecting scratches the way wire-brush cleaners do. To clean your engine's drive wheels, simply attach the cleaning track's hook-up wires to a power pack, turn up the power, and hold each spinning driver over the cleaning pad. Dirt is gently, but thoroughly removed, leaving clean, scratch-free wheels. When a pad gets dirty, simply peel it off and replace it with a velcro-backed new one.

#81630 Loco Wheel Cleaning Station. Includes 10 cleaning pads, our plastic-compatible wheel cleaning solution, hook-up wires, 36" of track to accommodate even the longest locomotive, and instructions. . . **$19.95**

#81745 Extra Wheel and Track Liquid Cleaner (2 oz) **$4.95**

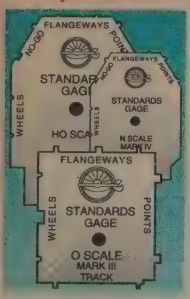
#81744 Extra Loco Wheel Cleaning Pads (10) **$4.95**

For HO gauge trains only.



Shipped by UPS ground only.

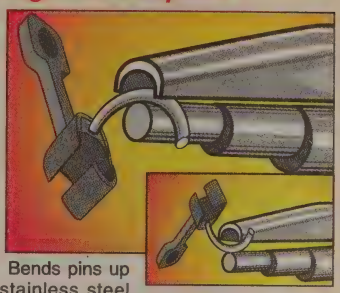
NMRA Gages Assure Trouble Free Operation of Your Model Railroad



These gages help you to make adjustments to rolling stock and track to end annoying derailments. They'll check for accurate track and switch dimensions, wheel spacing, flange depth, tire width and wobble. The HO and N scale gages also check for structure clearance so trains can pass without hitting tunnel portals, station platforms, scenery, etc. These are precision measuring instruments manufactured of stainless steel by the National Model RR Assoc. Instructions included.

#80752 HO Scale Gage **$10.95**
#80753 N Scale Gage **$10.95**
#80754 O Scale Gage **$10.95**

Trip Pin Bending Plier for Magnetic Couplers



Adjust your Kadee®, Intermountain and McHenry trip pins the easy, accurate way. Just place the pin between the jaws and squeeze. How hard you squeeze determines how far you'll bend the pin. Bends pins up or down. Plier is stainless steel with box joint construction.

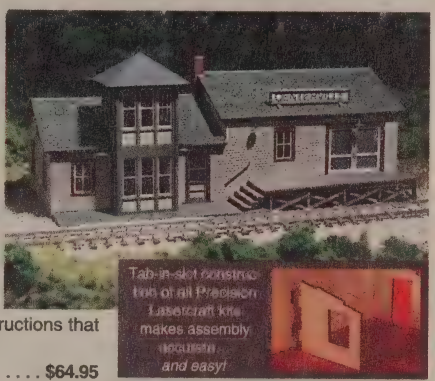
#80600 Trip Pin Plier For HO **$10.95**
#80892 Trip Pin Plier For N **$10.95**

Heavy Duty Flush Cut Rail Nipper

A well made tool designed for cutting model railroad track. The special cutting edges make smooth, square cuts and the wide throat allows cutting close to the work. It's also a great tool for cutting brass and other non-ferrous wire and rod. 6-1/2" long. Expensive, but worth the price.

#60315 Rail Nipper . . . . . List $26.95
Our Price **$19.95**

Here's a Great Little Addition to Your HO Model Railroad...



The Small Town Depot. It's compact (only 4 inches deep by 7 inches long), yet serves three functions: as a passenger station, a freight station and a tower...all in one building. This craftsman kit from Precision Lasercraft includes laser-cut wood parts and clear instructions that make assembly easy.

#82453 Small Town Depot. **$64.95**

WAHL Clipper Oil Makes Trains Run Smoothly

Hundreds of model railroaders have reported that electrical contact between wheels and rail is greatly improved and trains run smoother after applying a few drops of Wahl Clipper Oil to their track. Try it and see for yourself! 4 oz.bottle.

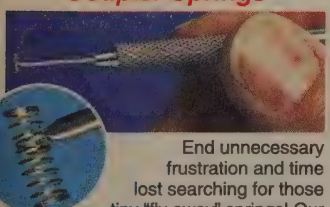
#82035 Wahl Clipper Oil **$4.95**

Soft-Touch™ Foam Cradle for the Model Railroader

This unique tool protects locomotives and rolling stock from damage while you paint or add details, apply decals, assemble or repair. Soft foam holds gently yet securely. Two different size "wells" hold HO and N scale. Use one well to hold tools while the other holds your model. 12" long x 6" wide x 2" high.

#80784 Soft Touch Cradle **$7.95**

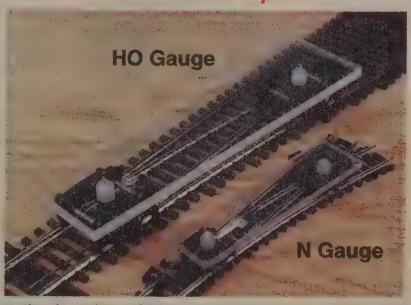
Reduce Stress with the "Grabber" for KADEE® Coupler Springs



End unnecessary frustration and time lost searching for those tiny "fly away" springs! Our "grabber" holds, inserts and removes Kadee and other micro springs with ease. Made of surgical quality stainless steel with a specially forged tapered ball end. 4-1/4" long. You'll wonder how you got along without it!

#81029 Spring Grabber **$4.95**

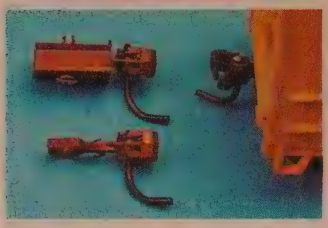
Track Inspection Car Finds Trouble Spots



Smooth trackwork is essential to reliable model railroad performance. Problems with track can take some of the fun out of train operation and identifying trouble spots can be difficult without the proper equipment. Our track inspection car makes the job easy. The crystal clear floor of the car gives you the best view of the movement of wheelsets through switches and crossings, around curves, and at rail joints. You can quickly detect the location of kinks, bumps, dips and roughness which can hamper the smooth operation of your trains. Trouble spots can be repaired, then re-checked with the car to assure smooth operation and give more operating satisfaction. Assembles easily in a few minutes. Includes trucks, hardware and instructions.

#80916 HO Track Inspection Car with plastic wheels **$9.95**
#82414 HO Track Inspection Car with metal wheels **$11.95**
#82120 N Track Inspection Car with plastic wheels **$9.95**

Scale Couplers Improve Your Model Railroad's Performance



These magnetic HO couplers by Intermountain Railway Co. look and perform like the real thing. They couple cars with just a gentle nudge...and uncouple just as easily when passed over a magnetic ramp, or anywhere using our #80972 Uncoupling Tool. And because the knuckle and centering springs are molded-in, you won't have to fumble with tiny "fly-away" springs that other couplers use. Made of engineering plastic with metal trip pins. Compatible with Kadee and McHenry couplers. Upgrade your hard-to-uncouple, out-of-scale horn-hook couplers today at less than $1.00 per car!

Without Mounting Box
(fits the box provided with Athearn, Accurail, ConCor, Intermountain, Model Die Casting and Walthers car kits)

#81370 10 pair, black color **$9.25**
#81371 25 pair, black color . . . **$21.25**
#81374 10 pair, rust color **$9.25**
#81375 25 pair, rust color **$21.25**

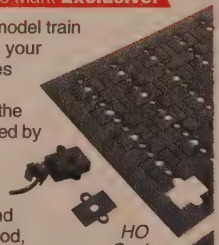
With Mounting Box
(for installations other than above)

#81372 10 pair, black color . . . **$10.50**
#81373 25 pair, black color . . . **$24.50**
#81376 10 pair, rust color **$10.50**
#81377 25 pair, rust color **$24.50**

NEW!

Laser Cut Coupler Shims – a Real Time Saver

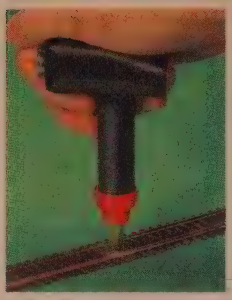
A Micro-Mark **Exclusive!**



For reliable model train operation, all your coupler boxes must be shimmed to the height specified by the NMRA. Making your own shims out of bits and pieces of wood, metal, paper or plastic can be a frustrating and time-consuming task, so we've done the work for you. Our laser-cut coupler shims are made of .025" thick insulation-grade compressed paper and are an exact fit for popular makes of HO and O scale coupler pockets, including Kadee, Intermountain and Weaver. They're easy to install and can be trimmed to fit tight locations.

#82562 HO Coupler Shims (25) . . **$5.95**
#82582 O Coupler Shims (20) . . **$6.50**

Hammer Drives a Nail With One Push



A fantastic tool that drives nails in places an ordinary hammer head won't fit! Especially good for small size brads that are hard to hold. Just drop nail head-first into the guide tube. Magnetized plunger holds nail until you're ready to push, and since the guide tube is transparent, it's easy to position the nail where you need it. Works on all steel nails up to 1-1/4" long x 3/16" head dia. It may be hard to believe, but this tool REALLY works. We guarantee it!

#15262 Push Hammer **$8.50**

Black Micro Nails for Laying Model Railroad Track

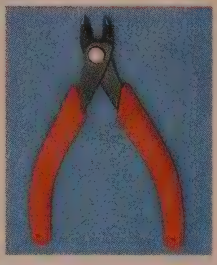
Hard-to-find black oxide finish eliminates unrealistic bright nail heads on your layout. Nails fit Atlas and most other brands of HO and N scale track. 20 gauge (.035" to .037" diameter). One ounce package (approx. 300 nails).

#70209 1/2" long **$2.95**
#70210 3/4" long **$2.95**

Holder for Micro Nails Saves Your Fingers

#70218 Nail Holder . . **$2.95**

Xuron Track Cutter



Cuts model railroad track up to HO gauge clean and square. 6" long.

#80337 Track Cutter **$11.95**

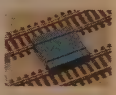
Track Laying Tools for the Model Railroader by MLR

Whether you're a beginner or an old pro, laying track accurately is the secret to trouble-free operation of your model railroad. These tools from MLR can help you to have a quieter, smoother rolling layout without annoying derailments. Set of four track tools includes:

STANDARD SETS

Ballast Spreader. Relieves you of a time consuming, messy chore. Just set it on the track, fill the tube with ballast, and slide it along. Distributes ballast on both sides of the rail with a nice even layer between the rails.

Track Tool. Provides a straight edge for cutting track without tie separation and for locating misaligned rail joints. Works on straight or curved sections.



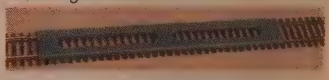
Parallel Tool. Maintains spacing (3" HO, 2-3/16" N) for two tracks running parallel to each other.

Soldering Tool. Prevents rails with plastic ties from moving while soldering joints or feeder wires.

#60754 N Gauge Track Laying Tool Set **$15.95**
#60755 HO Gauge Track Laying Tool Set **$15.95**

DELUXE SETS

Include the above four tools plus the following 2 tools:



Flex Track Alignment Tool. Straightens flexible track section while nailing it down to the roadbed.

Radius Tool. Consists of two radius bars that let you draw curves from 7" to 23" radius in half-inch increments.

#81500 N Gauge Deluxe Track Laying Set **$29.95**
#81508 HO Gauge Deluxe Track Laying Set **$29.95**

BALLAST SPREADERS ONLY

#82396 N Ballast Spreader . . . **$8.95**
#82395 HO Ballast Spreader . . . **$8.95**

Power Command 9500

This high-powered 30VA control runs all scales from N through G and has a voltmeter and an ammeter to monitor the performance of up to 9 average HO trains. The Advanced Proportional Tracking Control has sophisticated circuitry which detects and compensates for changes in load on your locomotives, thereby smoothing out the power as the train travels up and down hills and around curves. Momentum and braking controls mimic the delay in train speed changes experienced by real locomotives. Includes indicator lamps, Throttlemaster knob, direction switch, power switch, AC accessory terminals, fixed DC terminals, automatic circuit protector, plastic cabinet. For DC powered trains only.

SAVE 30%!

#81347 Power Command 9500 . . . . . List $104.98 . . . . . Our Price **$73.50**

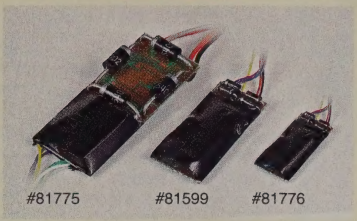
DCC Runs 10 Trains on the Same Track without Complicated Wiring

DCC (**D**igital **C**ommand **C**ontrol), the latest breakthrough in model train operation, is made easy and affordable with the Command 2000 system by MRC. You can independently control the speed and direction of 10 locomotives on the same track, without track selectors, without track controllers, without any complicated wiring! Simply install the Command 2000 Console between your existing power pack (or use #81953 Power Supply shown below) and your track. In less than a minute, a decoder-equipped locomotive can be programmed to respond to your commands. Includes realistic 28-step speed control, momentum, lighting and accessory effects. Capacity: 2.5 amp. Backed by MRC's 5-year warranty. Easy instructions included. For DC powered trains only.

#81598 Command 2000 Console . . . List $169.98 . . . Our Price **$135.95**

#81600 Walkaround 2000. Plugs into Console. Controls 4 of the 10 locomotives. Includes 15' coiled wire. Up to two Walkarounds (each controlling 2 locos) may be used with a Console.
List $39.98 . . . . . Our Price **$31.95**

Decoders



#81775 #81599 #81776

Install a decoder in each locomotive you want to control with the Command 2000. All MRC decoders are NMRA compatible, accept up to 127 locomotive addresses, have directional lighting control plus programmable start voltages and momentum rates. Easy instructions included.

#81775 G/O scale Decoder. Capacity: 2.5 amp. Includes two extra accessory functions. Size: .375 x 1.161 x 2.185 inch.
List $39.98 . . . . . Our Price **$29.95**

#81599 HO scale Decoder. Capacity: 1.0 amp. With NMRA standard connector. Size: .295 x .650 x 1.161 inch. ***Save 20%***
List $24.98 . . . . . Our Price **$19.95**

#82469 HO decoders 3 Pack ***Save 25%***
List $74.94 . . . . . Our Price **$55.95**

#82468 HO decoders 10 Pack ***Save 30%***
List $249.80 . . . . . Our Price **$174.95**

#81776 N scale Decoder. Capacity: 0.8 amp. Size: .177 x .335 x .905 inch.
List $39.98 . . . . . Our Price **$31.95**

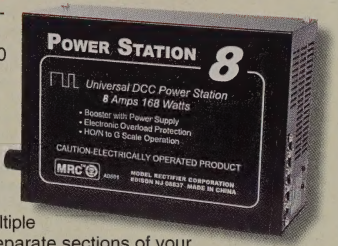
Power Supply for Command 2000 and Other Accessories

This highly efficient 3.5 amp, 12 volt/18 volt AC power supply was designed primarily for use with the MRC Command 2000, but is so versatile it may be used to power road race sets, lighting systems, animation devices and other AC-powered accessories. Includes overload indicator with circuit breaker and easy-to-connect 12v and 18v terminals. Plugs into standard 110v AC outlet.

#81953 Power Supply . . . List $39.98 . . . Our Price **$31.95**

(Note: Although this is an AC power supply, the Command 2000 converts the current for use with all DC powered trains. If used as an accessory power supply, the accessories must be AC compatible).

Universal DCC Booster Powers up to 25 Trains



Increases the power-handling ability of the MRC Command 2000 or any other DCC Command Station to 8 amps. Includes its own power supply. The output voltage is knob-adjustable from 14 to 20 volts. You can also use multiple boosters to power separate sections of your layout. Includes ON-OFF switch, electronic overload protection, 6' line cord and easy-to-follow instructions.

#82034 Power Station 8 . . List $289.98 . . Our Price **$229.95**

DCC Bus Controller Lets You Run 20 Trains on the Same Track

Connects two Command 2000 Consoles together so you can control twice the amount of trains.

#82213 DCC Bus Controller
List $24.98 . . . . . Our Price **$19.95**

Auto Reverse Module

Eliminates the special wiring needed for model railroad reverse loops. 2.0 amps max.

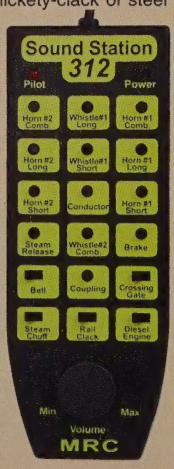
#82029 Auto Reverse Module
List $39.98 . . . . . Our Price **$31.95**

NEW!

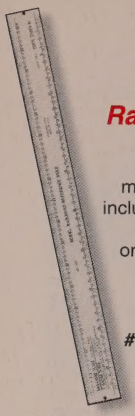
Realistic Railroad Sounds Make Your Layout Come Alive

The conductor shouts, "All aboard!" You hear the release of steam, the bell sounds, and you're off. Whistle for the grade crossing...hear the sounds of the crossing gate bell and the clickety-clack of steel wheels on steel rail. MRC equipped its Sound Station 312 with high-quality digital recordings of actual steam and diesel train sounds – 18 in all – that make your railroad come alive. Includes two speakers with powerful, self-contained amplifier, sound-on-sound capability, and hand-held controller with volume control and 8' cord. Plugs into 110v AC wall outlet.

#82451 MRC Sound Station 312
List $69.98 . . . . . Our Price **$55.95**



Stainless Steel Model Railroader's Rule



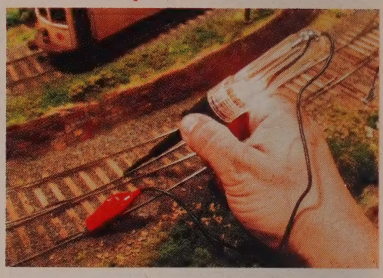
Scale graduations in HO, O, S and N, plus inch and millimeter calibrations. Also includes a decimal equivalent chart and reference table on the opposite side. A versatile rule for the model railroader. 1" wide x 12" long. Stainless Steel.

#10116 Model Railroader's Rule . . **$8.50**

Circuit Tester Instantly Locates Electrical Trouble Spots

Why won't that lamp light? Why does that train always stall right there? Why won't my R/C car run? Our circuit tester makes these questions easy to answer. Simply clip the wire lead on one side of your circuit and touch the probe to the other. If voltage is present, a lamp inside the handle will light. Instantly locates open circuits or shorts. For use on all 6-12 volt systems (AC or DC).

#81872 Circuit Tester. **$6.95**



The Best Spiking Plier for Handlaying Track

With this great spiking plier, handlaying your own railroad track can now be a pleasure, rather than a chore. The serrated jaws grip spikes securely so they drive straight without flying away or misaligning the rail. The nose is specially contoured to push the spike home without slipping off and damaging the railhead or ties. And the comfortable grips let you spike for hours without fatigue. Your trackwork will be smooth and trouble-free. Works on all scales of track and brands of spikes. Made for us in the USA by Xuron.

#81746 Spiking Plier **$10.95**

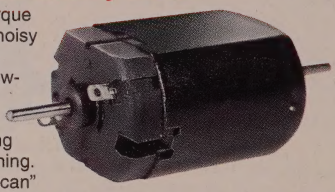
Note: For smooth trackwork, prebend your rail with our #81356 Bending Machine shown on page 40.

Wheel and Track Cleaner

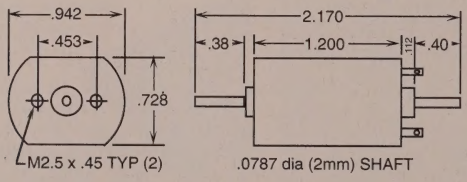
Our special blend of plastic compatible solvents thoroughly removes the gunk that collects on model railroad wheels and track. Just apply a little to a cleaning pad and wipe dirt away. Electrical continuity will be restored and your trains will run smoothly. 2 oz. bottle. Shipped by UPS ground only.

#81745 Wheel and Track Cleaner **$4.95**

Transform Balky Locomotives into Smooth Performers with Our Premium Quality Motor



Use our premium quality, high-torque permag motor to upgrade balky, noisy locomotives into smooth running, powerful haulers. The 5-pole, skew-wound, balanced armature and oil-impregnated bronze sleeve bearings provide lurch-free starting and silky-smooth slow speed running. And the narrow profile of the "flat can" design fits into the hoods of HO diesels or the fireboxes of steamers. Can also be used for larger-scale narrow gauge locomotives, trolleys and rail cars. Compatible with either straight DC or DCC systems.



Specifications:

No load @ 12v: 11,300rpm/.05a.; Typical 50gm-cm load @12v: 7,700rpm/.50a.; Stall torque @12v: 150 gm-cm/1.20a. 2mm double-ended shaft.

#82302 Flat Can Motor **$19.95**

Uncouple Model RR Cars Anywhere Without Derailments

You no longer have to re-rail your cars every time you uncouple them and there's no need to restrict the uncoupling of cars to unsightly magnetic ramp locations. Spot cars exactly where you want them and uncouple with-out lifting the wheels. Just insert the tip of this unique tool between the couplers and the cars separate. Works on both Kadee®, Intermountain, McHenry and standard train set couplers in HO and N scale. Made of surgical stainless steel. Includes protective storage wallet.

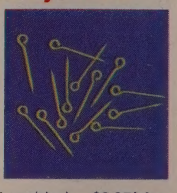
#80972 Uncoupling Tool **$5.50**

Miniature Brushes Reach Where Others Can't

Fine wire and nylon bristle brushes clean needle files, saw blades, drill bits, etc. Remove rust, tarnish, baked on dirt and "scratch" metal for better solder adhesion. Ideal for all miniature work. 1/2" long bristles. Molded polypropylene handles. 7" long. Price is for 2.

#50300 Stainless Steel Bristles **$4.35**
#50301 Brass Bristles **$4.35**
#50302 Nylon Bristles **$4.35**
#50303 SAVE! Set of 6 (One of each item # above) **$11.95**

Miniature Brass Eye Pins



Use for hanging mini items in the dollhouse, railing stanchions for railroad models, tying off lines on ship models, etc. .033" diameter brass, 1/2" long, 3/64" inside eye diameter.

#60405 Eye Pins (Approx. 144 pcs/pkg.) . . **$3.95/pkg.**

Car Weighting System Optimizes Model Railroad Performance

Improperly weighted model railroad cars cause annoying and embarrassing operation: long, light cars at the front of a train are pulled off the track on curves, and those that are too heavy reduce the number of cars a locomotive may pull. Our Car Weighting System optimizes car weight so derailments are avoided and train lengths are maximized. Includes a high-precision digital scale (described below) for weighing cars, 48 self-stick 1/4oz. lead weights, and a chart of optimum car weights based on NMRA specifications. Easy to use. Works with scales N through 0. **#82581** Car Weighting System **$48.95**

EXTRA STICK-ON WEIGHTS 1/2" wide, 1/4oz. lead weights with self-stick adhesive for adding weight to locomotives and cars, and for trimming boats and planes. **#82330** Package of 48 . . . . . **$9.95**

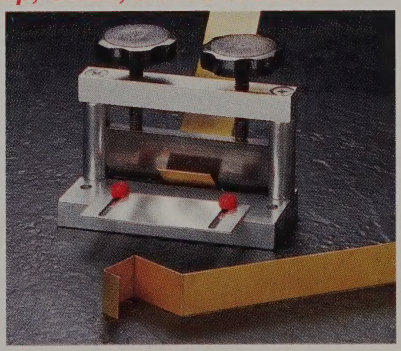
DIGITAL SCALE READS IN OUNCES AND GRAMS

High-precision, 4.4 pound (2 kg) capacity weight scale with digital readout in 0.1 ounce or 1 gram increments. Includes parts bin and tare feature for weighing items in bulk, count-down timer with alarm, thermometer and auto shut-off to conserve power. 5" diameter platen.

#82560 Digital Scale
List $46.95 . . Our Price **$39.95**

Miniature Bending Brake Produces Sharp, Clean, Bends in Metal

A press bending brake for brass or other light sheet metals. Makes bends up to 90 degrees (depending on how far you tighten the press screws). Will bend up to .020" half hard brass,3" wide. Can also be used on plastic. Adjustable depth guide permits duplication of bend placement. Includes reversible steel die and instructions. A beautifully made tool.



#16101 Bending Brake
$39.95

NEW!

Multi-Use Dual Power Heat Gun

Our dual-power heat gun makes easy work of softening and stripping paint from wood and metal surfaces. Use it to activate hot-melt adhesives, put the shrink in heat-shrink coverings and insulation, remove bubbles from water-clear resins, melt EZ water, dry paint, and soften resin castings to remove warp. Includes four snap-on nozzles, paint scraper and molded case. Develops 572°F at 10 cfm and 932°F at 17 cfm; 110v AC, 1500 watts.

#82583 Dual Power Heat Gun Set. **$25.95**

INDEX

Airbrush Equipment....49,54-59
Applicators 2,28,49-51,60-61,78
Aprons 39,88
Battery Chargers 21
Books....33,43,51,57,68,79
Brushes....16-17,22,32,39,53-59,80,86
Calipers 2,38,66-67
Carvers 29,38,51,70,74
Chucks....4,14,19,34,36,68
Clamps 30-31,37-38,49,54,68,73,77,81
Cleaners....6-7,26-27,43,53,55-56, 58-59,66,70,82-83
Collets 3-4,16
Compressors 55,57
Decal Supplies 48-49
Dies (Threading)....33,71
Display Cases....77
Dremel Tools 14-19,88
Drill Presses 8,11,15,88
Drills & Bits....5,8,11,15-19,25,33-34,38,40, 43,46,72-73
Electrical Devices...11,15,18,25,46-47,82,84-86,88
Files....23,32,70-72
Glue....29,60-61,78
Grinders....9-10,34
Grit Blaster (Sand Blaster)....6
Hammers....39,77,82,84
Hardware....19,38,64,68,79,84
Heat Guns 87
Hot Wire Tools 42
Jigs & Fixtures 6-7,12-13,15,22-23,33,36, 39,45,61,76
Kits....80,83,88
Knives & Blades 23,28,43,46,74-77
Lathes & Tooling....4-5,36
Lights....44-47,88
Lubricants 59,83
Magnifiers....44-45
Marking Tools 9,31,36,43,46,66-67
Metal & Metalworking Tools 3-5,7,28-29, 40-41,46,49,51
Milling Machines & Tooling 3-5
Miter Boxes....39,42,63,77
Mold Rubber 50,79
Motors....25,86
Nutdrivers 64-65
Organizers/Storage 6,18,29,54,64-65,73
Paints & Stains....2,48-50,53-54,56,58,79
Paint Mixers 56,58
Pin Vises....23,27,34,37,72,77
Plastic....6,43
Pliers & Nippers....27-30,35,37, 41,46-47,76-77,83-84
Polish....6,17,29,69
Pullers....39
Pumps 27
Punches....23,33,38,40,43,47,82
Putty 28-29,51,80
Railroad Tools & Controls....77,82-88
Reamers 39,70,72
Resin 28,50,79
Rotary Tools....10-11,14-16,18-19,30,88
Rotary Tool Accessories....10-11,14-19,26,30,34,88
Routers....15-16,74
Rulers....27,38,42,49,66-67,77,86
Sanders, Hand 7,22,68-69,71,77
Sanders, Power ...7,10-11,16-18,23,25,27,30,32
Saws, Hand....39,42,75-77
Saws, Power....2,9,12-13,24,26,32
Scales....87
Scenery 78-79
Scissors/Shears 23,30,43,46,49,75-76,81
Screwdrivers....27,64-65,72,77
Screws & Nuts 64
Scribers 9,30-31,43
Ship Tools....81-82
Solder & Soldering Tools 20-22
Spray Booths 57,59
Squares 27,40,42,47,70
Taps....33,40,43,71
Tape....47,53
Torches....21-22
Tweezers 37,46-47,49,76
Ultrasonic Cleaners 59
Vacuums....7,26-27,32
Video Tapes....79
Vises....3,8,15,26,32-33,36,40,70,81
Weathering 48,56,58,79
Wire Strippers....28,47
Wood....21,28,62-63
Wrenches 16,40,65,72

© 2001 Micro-Mark®
All items subject to availability.
Prices not applicable to prior purchases.
We reserve the right to correct typographical errors.
Products may vary slightly from photos.

Novus Polishes Your Models to Perfection

Expert car modeler Pat Covert uses the Novus Polishing System to get mirror-like, high-gloss finishes on acrylic surfaces. The 3-step process removes the fine scratches and haze created by sanding, then safeguards the glass-like finish with an anti-static, smudge-resistant protective coating. To get started, order the Try-it Pack...as a bonus, we'll include Pat's detailed instructions for obtaining award winning finishes.

#82462 Novus Try-it Pack.
Includes 2 fl. oz. each of #1 Clean & Shine, #2 Fine Scratch Remover and #3 Heavy Scratch Remover, plus 2 polishing cloths and 6 Soft Touch Sanding Pads (shown on page 69).

List $20.50 Save 35%.....Now only $13.50

Economy Refills

#82455 Novus #1 Clean & Shine Plastic Polish. 8 fl. oz. spray bottle **$4.45**
#82456 Novus #2 Fine Scratch Remover. 8 fl. oz. squeeze bottle **$6.25**
#82457 Novus #3 Heavy Scratch Remover. 8 fl. oz. squeeze bottle **$7.85**
#82458 Polish Mates. Package of 50 disposable, non-abrasive, absorbent, lint-free 12" x 12" cloths made specifically for use with Novus polish **$9.95**

NEW!

Miniature Lamps at Less Than 40 Cents Each

Miniature lamps bring attention to your models like nothing else, but they can be expensive if purchased individually. These grain-of-wheat size (1/8" dia. x 3/8" long) bulbs are packed in 100-piece bundles to save you money. 12-14v. AC/DC, .050a. 6" leads.

$39.95 per 100 piece bundle of one color

#82590-C Clear
#82590-A Amber
#82590-G Green
#82590-R Red

SAVE 40% OFF MSRP

Super Low Price on Metal Airplane Kits!

Perfect for Holiday Gift-Giving

Easy-to-assemble Testor airplane kits that both young and experienced hobbyists will enjoy assembling into museum quality models. Kits include a primer-coated die-cast body that's ready for paint (not included) and decals (included), plus molded plastic detail parts.

15-1/2" long

#82587 F-14 Tomcat Kit in 1:48 scale
List $64.95 . . . . . Catalog Special $38.95

6-9/16" long

#82586 F-18 Hornet Kit in 1:100 scale
List $24.95. . . . . Catalog Special $14.95

NEW!

Convert Your Train Pack to a Wireless Throttle

Want to run trains from a location away from your power pack? It's simple. Just connect Basic Train Engineer's receiver into the wires leading to your track and turn your power pack's control to full speed. Basic Train Engineer's hand-held radio transmitter sends your commands to the receiver to control speed, braking and direction...all from distances up to 30 feet. Works indoors or outdoors. Includes momentum effects to simulate the weight of a heavy train. Transmitter requires 9v battery (not included). For straight DC power packs only (not for use with hi-rail AC trains or with DCC systems). 2 amp capacity.

#82591 Basic Train Engineer
List $99.95
Our Price **$79.95**

PRINTED IN U.S.A.

Micro-Mark®
THE SMALL TOOL SPECIALISTS
340 SNYDER AVENUE
BERKELEY HEIGHTS, NJ 07922-1595

PRSRT STD
U.S. POSTAGE
PAID
MICRO-MARK

RON PATTERSON
17355 WALNUT AVE
ATASCADERO CA 93422-6624

CODE=1B316
********** AUTO ** 5-DIGIT 93422